STATE OF MINNESOTA DISTRICT COURT
COUNTY OF RAMSEY SECOND JUDICIAL DISTRICT
- -
The State of Minnesota,
by Hubert H. Humphrey, III,
its attorney general,
and
Blue Cross and Blue Shield
of Minnesota,
Plaintiffs,
vs. File No. C1-94-8565
Philip Morris, Incorporated, R.J.
Reynolds Tobacco Company, Brown &
Williamson Tobacco Corporation,
B.A.T. Industries P.L.C., Lorillard
Tobacco Company, The American
Tobacco Company, Liggett Group, Inc.,
The Council for Tobacco Research-U.S.A.,
Inc., and The Tobacco Institute, Inc.,
Defendants.
- -

DEPOSITION OF WILLIAM E. WECKER
SATURDAY, APRIL 18, 1998
VOLUME III pages 409 - 573
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

(The following is the continued deposition of WILLIAM E. WEKCER, taken pursuant to notice, at the Embassy Suites Hotel and Conference Center, 101 McInnis Parkway, San Rafael, California, commencing at approximately 9:00 o'clock a.m., April 18, 1998.)

APPEARANCES:

On Behalf of the Plaintiffs:
Thomas L. Hamlin
Robins, Kaplan, Miller & Ciresi LLP
Attorneys at Law
2800 LaSalle Plaza
800 LaSalle Avenue
Minneapolis, Minnesota 55403

On Behalf of R.J. Reynolds Tobacco Company and the Defendant:
Peter J. Biersteker
Jones, Day, Reavis & Pogue
Attorneys at Law
1450 G. Street N.W.
Washington, D.C. 20005-2088

On Behalf of Brown & Williamson Tobacco Corporation and the Defendant:
Barbara Mack Harding
Kirkland & Ellis
Attorneys at Law
655 Fifteenth Street N.W., Suite 1200
Washington, D.C. 20005

I N D E X

P L A N T I F F S '
D E P O S I T I O N E X H I B I T S

PROCEEDINGS

(Witness previously sworn.)

WILLIAM E. WECKER

called as a witness, being previously sworn, was examined and testified as follows:

ADVERSE EXAMINATION (cont'd)

BY MR. HAMLIN:

Q. Good morning, Dr. Wecker.

A. Good morning.

Q. You understand you are still under oath?

A. Yes.

Q. This is a continuation of your previous deposition of this matter. I'm going to be asking you some questions this morning. If you don't understand a question, please let me know and I'll try and rephrase it so you can understand it. Is that agreeable?

A. Yes.

Q. I also would appreciate it if you would wait until I finish asking my question before you start your answer because the court reporter can't pick up two people speaking at the same time. Is that also agreeable?

A. Yes.

Q. Lastly, I would appreciate it if you would say your answer in words because the court reporter can't pick up a nod of the head. Is that also agreeable?
A. Yes.
Q. Have you reviewed trial testimony of any of the witnesses in this case?
A. Yes.
Q. Who?
A. Samet, Zeger, Wyant.
Q. Anyone else?
A. No.
Q. Have you reviewed the opening statements of counsel in this case?
A. I don't remember if I received those or not. But if I did, I certainly didn't review them in their entirety; I might have just looked at them.
Q. Since the time of your last deposition have you consulted with an epidemiologist about this case or your opinions?
A. Yes, with the following understanding: I've consulted with the other people in my office who are experts in statistics and the application of statistics to matters of health.
Q. Anyone else?
A. No one outside the office.

Q. Have you consulted with a health economist since the time of your last deposition?
A. No, I've consulted with no economists.
Q. Have you consulted with any medical doctors since the time of your last deposition?
A. No.
Q. Have you consulted with any toxicologists since the time of your last deposition?
A. No.
Q. Have you reviewed any of the Surgeon General's reports on smoking and health since the time of your last deposition?
A. Yes.
Q. Which ones?
A. 1989. I think it's 1990. The exercise one.
Q. And for what reason did you review the 1989 report?
A. There was testimony by one of your experts, I've forgotten exactly which one, about that report in terms of the issue of controlling or confounding. So I went back to that report as guided by that testimony to see what it said.
Q. For what purpose did you review the 1990 report? Just so we're clear, the 1990 report is the one on smoking cessation?

A. Maybe that's not the one I looked at. I've forgotten the year. Maybe it's '96.
Q. I believe that's the report on exercise.
A. Yeah, it was the exercise report.
Q. For what purpose did you review the report on exercise?
A. Just to refresh my understanding what the Surgeon General had said about the importance of exercise for health.
Q. Since the time of your last deposition have you reviewed the Minnesota Medicaid claims data?
A. In terms of certain totals, not claim by claim.
Q. But you have looked at totals?
A. Yes. We're talking about what we call the -- to make sure I understand your question, what is often called in this case the pots, and I've done that.
Q. But you haven't looked at specific claims?
A. Well, I have the vaguest recollection that I might have done something like that, but it doesn't come to mind. If in the course of going through my work papers it comes to something that jogs my recollection on that, I'll be sure to bring it up, and I'll make a note of it. But right now, I can't think of a review of a person by person Medicaid Minnesota claim data.

Q. Have you reviewed the Blue Cross claims data since your last deposition?
A. No.
Q. Have you spoken with Dr. Rubin since your last deposition?
A. No.
Q. Have you spoken with Dr. McCall since your last deposition?
A. No.
Q. Now, since the last deposition, the Court has issued a number of orders in this case regarding damages. Have you been informed of that fact?
A. I guess I'm vaguely aware that the Judge has issued orders. I don't know the specifics about -- I don't know about the specifics of the orders.
Q. Let me ask you this: An order was issued on January 24th, 1998 regarding premature death. Have you been provided a copy of that order?
A. No.
Q. Has that order been explained to you?
A. No.
Q. Have you gone back to your reports to determine whether any of your calculations violate that order?
A. No, in the sense that I -- not knowing exactly what the order is, and on top of that not being a

lawyer, I probably don't have the capacity to do that, even if I tried.
Q. So you didn't go back to your reports?
A. I've been back to my reports, but I haven't -- I tried to give them more fulsome answers so we could communicate; I certainly haven't gone with that particular purpose. As I was thinking about the question in the course of answering it, it occurred to me that I'm not really trained to do that and wouldn't attempt if I was asked.
Q. On January 26th, 1998 the Court issued another order denying the defendant's motion to dismiss certain antitrust claims. In that order the Court stated in part that the plaintiffs are entitled to seek the full measure of damages for their entire indivisible injury. Have you been provided with a copy of that January 26th order?
A. No.
Q. Has that order been explained to you?
A. No.
Q. Do you have any understanding of that order?
A. Only about the general level of this conversation. I don't know exactly what it means.
Q. Well, can you tell me generally what you understand the order to mean?

A. I'll give you my impression, but I'm not claiming that I have authoritative expert ability to put forward an understanding.

I thought it was something like a burden shifting decision that would work like this: That as I see it, any reasonable person would immediately see that plaintiffs could not reasonably be claiming damages arising from all smoking from all time; so that a question arises as to which damages from which smoking are involved in the claim.

And apparently the Judge's decision, as I understand it in my layman's role here -- when I say "layman", I mean not an expert in the law and where my expertise in statistics doesn't help. So my understanding is that rather than requiring plaintiffs to make that division and prove it up, so to speak, that is now going to be a requirement for defendants. That's my sense of it.

Q. Do you have any understanding as to what effect, if any, that order has on your opinion regarding the wrong question which you reference in your supplemental expert report?

A. No. I'm not sure when it comes down to the specifics of the courtroom procedure exactly how the -- any of my opinions would be affected.

Q. The Court also issued an order on February 19th, 1998 stating in part --
A. Can I go back? I was just thinking about that. I haven't thought about this before so I'm -- it's an interesting topic. I can't see how any of my opinions could be affected by these orders.
I'm going to think about what I think about what I think about, but what could be affected is what question is being posed. I'll bet that's the way it turns out.
So if there is an effect here, it will affect on lawyers and what questions they want to pose. I'm making a reasoned guess as to what the Court's orders affect.
Q. Has that effect on the questions that are put to you been explained to you?
A. No.
Q. Let me ask you about this February 19th, 1998 order. It states in part that, "The indivisible injury --
A. I didn't have a February 1. I had January 26th.
Q. I'm asking you about another order.
A. What's that date?
Q. The Court issued an order on February 19th, 1998. It states in part, "The indivisible injury

rule does not require plaintiffs to show damages are clearly distinct." Have you been provided a copy of that order?
A. No.
Q. Has that order been explained to you by counsel?
A. No.
Q. Do you have any understanding of that order?
A. Only what I could try to read into it from your paraphrasing a piece of it. It doesn't seem to make a lot of sense actually.
Q. Do you --
A. I'm not saying the Judge makes no sense, but that fragment by itself doesn't communicate a really clear thought to me at all.
Q. You would need to look at the entire order?
A. And then not being a lawyer, I would probably need a lawyer to explain it to me.
Q. Do you have any plans to review your expert report or reports in light of this order?
A. No. I hadn't formulated a plan to do that.
Q. You're aware that the defendants in this case asked the Court for leave to submit two new models on March 12th, 1998; is that right?
A. I'm not -- I don't know what you're referring to.
Q. Do you recall preparing I think what was called

a second supplemental report?
A. Yes. So that's what you're referring to?
Q. Yes.
A. I know about that.
Q. On March 12th, 1998 the defendants asked the Court for leave to submit that report. On April 1 the Court denied that request. Are you aware of that?
A. Yes, I believe I read that.
Q. Has the significance of that order been explained to you?
A. No.
Q. Let me show you -- first of all, let's mark it.
(Wecker Deposition Exhibit No. 4878 marked for identification.)
BY MR. HAMLIN:
Q. Dr. Wecker, let me show you what's been marked as Deposition Exhibit 4878. This is a copy of your supplemental expert report, correct?
A. Yes.
Q. Did you prepare this report?
A. Yes.
Q. How many drafts did you prepare of this report?
A. Well, the way I think of a draft, I would say none, but obviously I didn't type in every word in --

the first time exactly as the way it ended up on the page. With the way we do things on computers now, the old idea of a draft is starting to lose meaning.
Q. You did make revisions to the report?
A. Stylistically. I can't think of any substantive. I just tried to express myself well.
Q. Did you save those first attempts to express yourself?
A. I think the question mischaracterizes the process. As I -- I suppose you know, but you can tell me if this is novelty and I'll explain the process more fully. But with a word processor in a computer file, every time you press a key there is a change, and I don't really think of those as changes. But if you were picky about what is a change, I suppose you would have to count every key stroke.
So what I do not have and did not have is some version of this that might be called version one; that was say the version for a time and then later another version came on. This is just the normal course of producing this document, typing changes.
Q. Are you saying that you only made changes to correct typos?
A. No. I'm -- I feel sure you know how this works;

if we have a word processor program in one of these computers in front of us, we could go through the process. You start with a file that has nothing in it and you start typing your words, and then you read them and see how they read to you. And sometimes there is a typo, sometimes a spelling error, but most often it's just a matter of clarity and expression, so you try to rephrase things to make your communication better.
Q. But you didn't make any effort to save those, if you will, original expressions, right? I mean, that's not your normal course?
A. No one does that.
Q. And all I'm asking is whether or not you made any effort to do that in this case.
A. No. It's not -- no one does that sort of thing. But let's not confuse what I was doing was I think a legitimate concept of what you might call a preliminary version, which has a certain distinct status which might better fit your idea of things to be saved, and I just don't have those things to be saved.
Q. Did you generate any written memos in connection with your expert report?
A. Not that -- not other than what we have -- what

has been produced to you, the affidavit, a few reports.
Q. Now, your opinions in this case are contained in your original expert report and in your supplemental expert report; is that correct?
A. Yes, and there is an affidavit that I'm sure you have and then there is --
Q. What's the date of the affidavit?
A. The 29, December, '97.
(Wecker Deposition Exhibit No. 4879 marked for identification.)
BY MR. HAMLIN:
Q. Let me show you what's been marked as Deposition Exhibit 4879. Is that the affidavit that you're referring to?
A. It appears to be, but it's not signed. So it isn't quite the same as my copy in the sense that at least it's not signed. I haven't checked every word.
Q. Just for the record, I think the reason it's not signed is that it was filed on CLAD.
A. I don't know what that means.
Q. It was filed electronically?
A. So it appears to be -- and if it's important, we can check word by word. My quick check showed it appeared to be the same in substance.

Q. Do you have opinions in this case that are not contained in these two reports and in your affidavit?
A. Well, there was an original report that you haven't mentioned or I haven't mentioned yet.
Q. I asked you this question: Do you have opinions that are not contained in the two expert reports that you filed in this case and in your affidavit which we just marked as Deposition Exhibit 4879.
A. There is a supplemental -- second supplemental report which is subject to an order, and I have opinions in that. I think that, yes, those cover my opinions. You could elaborate them and probe them with further questioning, but I think the umbrella of those materials would identify my opinions in the case.
Q. And do you have opinions in this case that are not contained in those -- strike that -- in the documents that you just identified?
A. I understand that to be the same question. I misunderstood your question before.
MR. BIERSTEKER: Mr. Hamlin, the Deposition Exhibit 4879 has got some handwritten notations in the last page that I don't think were the witness' or ours. As long as that's clear on the record, that's fine.

THE WITNESS: Can we go off?
(Discussion held off the record.)
BY MR. HAMLIN:
Q. Now, you also performed a nursing home analysis just recently; is that right?
A. Nursing home analysis is your own expert's analysis. I have reviewed that analysis.
Q. You were provided with a disk with Dr. Wyant's test of the nursing home model on it, right?
A. I think I know what you mean, the 60- to 90-year-old?
Q. That's where he looked at the 60- to 90-year-olds. So you did receive a copy of that disk; is that right?
A. I would have to check whether we got a disk, but I certainly understand what it is. I don't have any problem understanding it.
Q. Did you review Dr. Wyant's work in connection with that test?
A. I can tell you what I did.
Q. Why don't you tell me what you did.
A. Having understood from his description of the calculation, it was really a simple matter; to go to his calculations, make the changes that I understood he made and get the results that were consistent with

what we understood he was coming up with. Whether we did that by looking at his work or just understood it automatically, I'm not sure.
Q. It was a pretty simple calculation, correct?
A. It's not a difficult calculation.
Q. Were there any --
A. Well, it's -- let me back up. It's expert work. I don't mean that it's easy for just anybody, but if you're already steeped in the understanding of the computer programs involved here, this is not a huge leap.
Q. Did you find any errors in Dr. Wyant's calculations?
A. You mean like arithmetic? No. I think he implemented adequately what he intended to do, if that's what you mean.
Q. I'm asking you if you found math errors.
MR. BIERSTEKER: In the nursing home --
BY MR. HAMLIN:
Q. In the nursing home 60- to 90-year-old analysis test.
A. If you mean like arithmetic errors, I would say I did not.
Q. Did you put any of your conclusions about Dr.

Wyant's nursing home analysis test in writing?
A. In the sense of something like a memo, no. In the sense of I've done some work on that and I have work papers I've provided to you, yes.
Q. Have you reviewed Dr. Wyant's comparison of mortality rates from smoking-related diseases for the United States and Minnesota?
A. Let me see if I can figure out what you're referring to. He talked about comparing his results in percentage terms from his calculations in Minnesota to certain percentages in other studies that are mainly national. Is that what we're talking about?
Q. Do you recall Dr. Wyant's testimony about mortality rates in the United States and Minnesota?
A. Well, I recall a lot of testimony, and I'm trying to put my finger on which one you're talking about. So the testimony you're talking about is not as comparison of Minnesota to the United States in percentage terms, where the Minnesota figures are actually dollars; but you're talking about Minnesota mortality as distinguished?
Q. I'm talking about Minnesota mortality.
A. Well, I remember his work -- from his work papers on that, and I've forgotten whether he did

that at trial or not. If he did, then it's probably the same material that I'm familiar with.
Q. Did you find any errors in any of Dr. Wyant's calculations with respect to that subject?
A. We're talking about like arithmetic errors as opposed to conceptual or --
Q. We're talking about arithmetic errors.
A. I don't recall finding any arithmetic errors.
Q. Do you recall receiving a computer disk which contained that calculation?
A. That would have been sometime ago about the same thing?
Q. Correct.
A. I don't specifically recall the arrival of the disk, but I do recall sometime ago reviewing that material.
Q. Let me direct your attention to the supplemental report which has been marked as Deposition Exhibit 4878. At the bottom of page 2 you state that, "Zeger did not compare the costs of all smokers versus non-smokers within the public aid sample alone or the private insurance sample alone including all medical expenses using one consistent methodology. I performed such an analysis separately for the public aid and private insurance group." And you go on to

say, "I recalculated smokers' costs after assigning them the same average costs as non-smokers."
This calculation that you're referring to was the source of the data in the 1987 NMES survey?
A. Yes, that was the source.
Q. I want to ask you a couple of questions about the public aid population in NMES. Do you recall the number of smokers in the public aid population?
A. Not off the top of my head, no.
Q. Now, you've got a number of documents with you, correct?
A. Yes.
Q. Do you know if any of that information contained contains that number for smokers in NMES?
A. I don't know, but it's possible. I could look.
(Wecker Deposition Exhibit 4880 marked for identification.)
BY MR. HAMLIN:
Q. Let me show you what's been marked as Deposition Exhibit 4880, and I want to represent to you that this is a run from one of the disks that we received in connection with your supplemental report. Just for purposes of trying to speed things up a little bit, let me direct your attention to what looks like page 10, which is the facts page, and the page is

titled, "Overall Summary of Medical Expense by Age and Sex," and I just ask you if you recognize that.
MR. BIERSTEKER: Tom, is it possible for you to identify the program it produces?
MR. HAMLIN: I don't know.
THE WITNESS: Well, I can figure it out later.
BY MR. HAMLIN:
Q. Here's what I want to direct your attention to: The portion of the page specifically that contains this information, never smoker, ever smoker, it appears to us that that does contain information about the number of smokers on NMES who were on public aid, as well as the number of never smokers on NMES were public aid --
A. Yes. I think --
Q. -- is that right?
A. I think that's correct. I believe you understand correctly the printout.
Q. Using this exhibit, can you tell me the number of smokers on public aid in NMES?
A. 1,128.
Q. And what is the number of never smokers on public aid?
A. 854.

Q. What is the percentage then of smokers on public aid in NMES?
A. As a percentage of what?
Q. Well, as a percentage of the total number of people indicated here on public aid.
A. Well, we need another number for that. Maybe I don't understand your question.
Q. Wouldn't we just take the number of smokers --
A. Let me start by getting a calculator. Go ahead please.
Q. Let's just do this calculation. Let's put the number of smokers on public aid and the numerator should be 1,128. And then for the denominator, let's put both the number of smokers, 1,128 and the number of never smokers on public aid. I believe that number is 854.
A. 57 percent.
Q. Now, is that the percentage of smokers on public aid in NMES?
A. It's the percentage of smokers on public aid in NMES as a percentage of all public aid in NMES.
Q. Let me ask you now about non-public aid on NMES. I think we can go back to the exhibit on the same page, right?
A. Probably.

Q. Can you tell me the number of smokers not on public aid in NMES according to your chart?
A. Looks like 9,555.
Q. Can you tell me the number of never smokers not on public aid in NMES according to your chart?
A. 9,030, 9,030.
Q. Let's do this calculation. Let's put the number of non-public aid smokers in the numerator. That's 9,955?
A. 52 percent.
Q. So you did the calculation and it's 52 percent?
A. Yes, but for the record, I'm being a little smartalic, but the 52 percent is percent that the 9,955 is of the total 9,955 and 9,030.
Q. And does this represent the percentage of smokers who are not on public aid in NMES?
A. No.
Q. What is that percentage?
A. That would be a different number.
Q. Well, tell me what the 52 percent represents.
A. It's the percent of non-public aid smokers as a percentage of non-public aid in NMES.
Q. So when we compare the percentage that you just calculated, the public aid smoker percentage is greater than the non-public aid smoker percentage,

correct?
A. Yes, in the context of what we have been saying. Every time you say percentage, you invite confusion if you don't say as a percentage of what. But I think we have cleared it up with the previous questions.
Q. Now, have you reviewed any literature which describes the Medicaid program?
A. Yes.
Q. What have you reviewed?
A. I don't recall what it was. It's been sometime. It describes what classes of people get on Medicaid.
Q. Was this done in connection with your work in this case?
A. Yes, background reading.
Q. What populations does Medicaid affect?
A. You mean what populations are subsidized, receive benefits from --
Q. Or that may be affected by the Medicaid program.
A. Oh, that could be everybody; that's why I needed some clarity in the question.
Q. So it could be everybody, right?
A. The question is vague. The question could encompass everybody.
Q. Have you reviewed the Medicaid source book?

A. I might have. If you show it to me, I've just forgotten the name of the document.
Q. Let me show you what's been marked as Trial Exhibit 26,049. This is an excerpt from that exhibit; the exhibit itself was larger. Do you recall whether you reviewed this Medicaid source book from just looking at the excerpt?
A. I don't think I did.
Q. Let me direct your attention to page 735 which is the third page of that exhibit. In the second full paragraph it states as follows: Results from this longitudinal study suggest that the program affects two rather distinct populations. A sizable share of Medicaid leaves appears to be from the ranks of workers who, because of job loss reduced work hours or reduced hourly wages find themselves eligible for Medicaid. About 22 percent of those persons becoming eligible for Medicaid were in middle or high income families prior to their Medicaid coverage. A second group of Medicaid enrollees faced more long-term economic hardships. About half of new Medicaid participants were living in families with income below the poverty threshold prior to Medicaid enrollment.
Do you have any reason to disagree with

that statement?
A. I don't have a basis to agree or disagree because I haven't reviewed the study that it's referring to.
Q. Let me direct your attention now to page 738 which is the next page on the exhibit. I want to direct your attention to the first full paragraph. About the middle of the paragraph it states, "A family's gross monthly cash income." Do you see that?
A. Yes.
Q. It goes on to say, "Minus some disregard is the income used in determining AFDC, (and Medicaid) eligibility for the medically needed, and individuals' gross cash income may not be directly related to their Medicaid eligibility. Rather, these individuals qualify for Medicaid because their medical expenses are so high that their net income, i.e., income after medical expenses, is below the state's maximal allowable income level."
Do you have any reason to disagree with that statement?
A. No, I don't.
Q. Let me direct your attention now to -- well, strike that. Let me ask you this: Would you agree

that the treatment of lung cancer can be costly?
A. Yes.
Q. That it can result in high medical bills?
A. Yes.
Q. And that it could force a person to go onto the Medicaid program if they didn't have sufficient resources to pay for those bills, right?
A. I don't know. It might or might not.
Q. It could?
A. I don't know. I've already told you that I don't have an independent basis to tell you about these requirement bills. I'm not disagreeing, I'm just saying I can't tell you. You're saying it could, and I have no basis to disagree with you.
Q. Let's go to page 740 which is the next page. Down at the bottom of the page it states, "First, like their cash assistance counter-parts." Do you see that?
A. Not yet.
Q. Down at the bottom, last paragraph.
A. Yes, I see it.
Q. Let me read it. It states, "First, like their cash assistance counterparts, these individuals must be in families that meet the categorical eligibility criteria, i.e., single parent family aged and are

disabled. In addition, these individuals must either have incomes below the medically needy thresholds or incur medical expenses that reduce their income to levels that are close to the thresholds used in the AFDC program for family of comparable size."

Again, let me ask you this: Do you have any reason to disagree with that statement?

A. No, I don't have a basis to either agree or disagree with it.

Q. And just for the record, that statement comes under paragraph 2 which is titled "Medically Needy Income Thresholds and the" --

A. Yes.

Q. Do you see that?

A. Yes.

Q. You just haven't studied the medically needy population or the effect Medicaid may have on that population, right?

A. That's too broad. But I certainly haven't studied these enrollment rules and their bureaucratic detail; the kind that we're reading now. I haven't studied it at that level and for that purpose.

Q. Now, going back to your supplemental expert report, and specifically the calculations that you perform separately for the public aid and private

insurance groups referenced at the top of page 3. Do you see that?
A. Yes.
Q. Let me ask you this: When you did the calculation for public aid, you looked at smokers and non-smokers on public aid in NMES, right?
A. Yes.
Q. You didn't look at any other populations, right?
A. Well, some of these -- some of the calculations that I did, and have provided to you, look at BRFSS individuals.
Q. Let me be clear. When you did this calculation of smokers versus non-smokers on public aid, you reference at the top of page 3 you only looked at the public aid population in NMES, right?
A. I don't think so. I've done more than one calculation that could be described as -- could be described consistently with the sentence we're reading, and I suppose if we get them out and look at them in detail, we could have better answers. But some of them include BRFSS I believe. I would want to check that.
Q. Well, do you recall doing a separate calculation for smokers and non-smokers on Public aid in NMES?
A. Yes. That's one thing I did; that's for sure.

Q. Now, with respect to that calculation --
A. Okay.
Q. -- you only looked at the public aid population in NMES, right?
A. Focusing on that particular comparison, that's correct.
Q. You didn't look at any people who may have -- strike that. You didn't look at any people who might be forced to go on Medicaid because they get a tobacco-related disease that is expensive, right?
A. Not in the particular comparison that we're isolating here.
Q. Now, does it matter to that calculation that you performed that smoking could force people to go onto Medicaid?
A. The calculation result would be the same whether what you say is true or not. To the extent that what you're saying is true, it might affect the data and therefore affect the result.
Q. So then it would matter?
A. Well, that's why I gave a somewhat longer answer. It's not clear whether you would say yes or no to that. The correctness or lack of correctness of your assertion in the question would influence the data that is used in the calculation. In that sense,

it would matter.
Q. In any case, with respect to your calculation of smokers and non-smokers on Public aid in NMES, you did not look at that population, right?
MR. BIERSTEKER: Object to the form.
THE WITNESS: That population being people not on public aid at that time of the calculation? At the time the data was collected, that's correct.
BY MR. HAMLIN:
Q. Now, let me direct your attention to your supplemental expert report. At the top of page 3, you state that you recalculated smokers' costs after assigning them the same average costs as non-smokers. Do you see that?
A. Yes.
Q. Can you tell me what that means?
A. Yes. It means doing, by way of calculation, a hypothetical in which I replace the actual costs that the public aid smokers incur with a different value, a different average value. And I take that average value by calculating the non-smoker average.
Q. And this is for the NMES public aid population?
A. Yes.
Q. Now, with respect to that calculation of the

Public aid population in NMES, were you attempting to answer the question of whether smokers cost more than non-smokers to treat?
A. That seems like a slightly different question.
Q. What question were you trying to answer?
A. Answering the question of what medical costs would be in the private insurance category; if smokers had the same average medical costs as non-smokers.
Q. Let's talk about the calculation public aid recipients --
A. Yes. I meant that throughout.
Q. We're talking about that calculation.
A. Yes.
Q. What you were attempting to do was to see whether or not smokers cost more than non-smokers, right?
MR. BIERSTEKER: Objection. Asked and answered.
THE WITNESS: On the average?
BY MR. HAMLIN:
Q. On average, that's what you were attempting to do, right?
A. Yes.
Q. Now, let me ask you about that specific

calculation. You calculated SAFs for six age and sex groups, right?
A. I think for the purpose of that calculation it's four; two age and two sex.
Q. What were the age groups?
A. 35 plus, 65 plus.
Q. Then you calculated total expenditures for smokers of those two age groups -- strike that -- the two age groups and two sex groups, right?
A. I have their total medical expenditures by group.
Q. And then you did a similar calculation for them as non-smokers, right?
A. Changing the costs to those of non-smokers, yes.
Q. And then you applied those SAFs to the billing data, the Medicaid billing data, and determined who costs more, right?
A. That's close enough I think. Not the way I would have said it, but I think you're getting the right idea. There is no way that this question and answer format is really going to be a stand-in for a complete spread sheet. We're missing some details. That's the idea.
Q. Now, in calculating the SAFs for that particular analysis, that is public aid NMES people, you counted all of the costs regardless of who the payer was,

right?
A. Yes. Total medical.
Q. Whether the payer was public aid or non-public aid, right?
A. That's right. If I'm understanding your question, that's the same way that your experts were doing their calculations.
Q. So in calculating the public aid SAF, you used total expenditures, not just what was paid by public aid, right?
A. Yes.
Q. With respect to these two groups, you compared their costs by comparing the two groups, right?
A. At that level of generality, yes.
Q. But you did not stratify by specific age in making those comparisons, right?
A. I did by age groups.
Q. And the age groups were 35 to 64 and 65 plus?
A. Right. Same age groups that your experts had been using.
Q. But you didn't compare, for example, 35-year-old smokers to 35-year-old non-smokers, right?
A. Right. I think if I understand you, it was -- they were compared, but they were compared in the context of a group that was larger than just the

35-year-olds. Could we take a break?
(Recess taken.)
BY MR. HAMLIN:
Q. Dr. Wecker, I want to ask you some questions again about this public aid calculation that you did that references the public aid population of NMES, okay? And I say that just so that when I ask you these series of questions, you know what calculation we're talking about, okay?
A. Yes.
Q. In that calculation did you control for smoking-related diseases?
A. The question confuses me. Normally when we think about control in this context, it's controlling for things like exercise or diet. I'm not sure what you mean when you say controlling for smoking-related disease.
Q. Let me ask you this: Did you make any distinctions about who had smoking-related diseases and who did not in that calculation?
A. Only insofar as the data itself made those distinctions.
Q. But you did not calculate smoking attributable expenditures for those who had lung cancer and COPD versus those who had other smoking-related diseases

the way the plaintiffs did, right?
A. No. I didn't do it separately, but I did it in the context of the more aggregate calculation.
Q. Now, you controlled for age group, correct?
A. Stratified by age group and sex.
Q. And you also controlled for smoking, right?
A. I wouldn't use the word "controlled". I compared smokers to non-smokers.
Q. Did you control for any factors in that calculation?
A. You mean like diet and exercise? That's what I think of when think of controlling in this context. No. This is a calculation that is in comparison to smokers to non-smokers within public aid stratifying by age and sex groups.
Q. Well, was it your conclusion that the plaintiffs incurred no extra expense for smokers based on this calculation?
A. Yes, that's I think a reasonable interpretation.
Q. Did your calculations show that for males and females over the age of 19 on public aid there was a positive smoking attributable expenditure of more than $54 million?
MR. BIERSTEKER: Object to the form.
THE WITNESS: I don't know where you

could be referring to. I could study the calculation and see if I could come up with that number and figure out which is your question.
BY MR. HAMLIN:
Q. So you don't remember coming up with that number?
A. There is too many numbers here to memorize that particular one; but if you want to give me a minute, I'll look to see if I see that number anywhere.
Q. Why don't you check. In the meantime, I'm going to mark this exhibit.
(Wecker Deposition Exhibit No. 4881 marked for identification.)
BY MR. HAMLIN:
Q. Let me show you what's been marked as Deposition Exhibit 4881, and I want to represent to you that that was taken as a run from one of the disks that you provided to us in connection with your supplemental expert report. Does that look familiar to you?
A. Okay. I've discovered the correspondence between the first page of Exhibit 4881 and my own materials, so I now understand what the spread sheet is you've handed me. Sorry to take a moment to do that. Now I'll actually get around to try to figure out how to answer your question.

I see the $54 million number that you mentioned.
Q. That number is a result of your calculation of average costs for males and females over 19 on public aid in NMES, right?
A. Yes, but it's not the calculation I was referring to in my report.
Q. I'm not referring now to that report. I'm simply talking about the spread sheet that is in front of you.
A. Yes.
Q. With respect to that number, the number shows that smokers cost $54 million more than non-smokers on public aid ages 19 and above, correct?
A. It shows for age 19 and above that if the smokers had the same cost as -- when you say that smokers cost more or less, that is a problem because of the numbers of smokers.
So if we understand this all as a per average, the nature of the calculation is smokers have the same average cost as non-smokers, and then there is a correction for the numbers of the people. But the gist of your question is correct, but it's not worded quite right. The smokers had the higher -- a slightly higher cost in the 19 and up age

group when viewed in the way this calculation does.
Q. And what you calculated was average cost of smokers versus non-smokers on public aid in NMES over the age of 19, correct?
A. That was part of the calculation.
Q. When you compared those average costs, the smokers on average -- strike that -- the smokers' average cost was $54,813,543 higher, correct?
A. Speaking somewhat loosely but reasonably, yes.
Q. In this comparison of NMES public aid smokers and non-smokers, you calculated average costs and compared by -- strike that -- and compared smokers to non-smokers with an age adjustment, right?
A. Roughly, right. I mean, we'll never be able to say in a sentence all the details of a calculation like this, but -- so I want to -- I'll say that once and then I won't trouble with it again, but you have the gist of it. That's a good way for me to respond.
Q. Let me direct your attention to the second page of Exhibit 4881. This is a spread sheet for Minnesota private insurance population on NMES, right?
A. Right.
Q. And again, this is your calculation?
A. Yes.
Q. Let me direct your attention to the bottom of

the page. Again, it appears when you compare average costs of smokers versus non-smokers over the age of 19 it shows that smokers' average costs are $340,391,439, right?
MR. BIERSTEKER: Object to the form.
THE WITNESS: Well, it shows that if smokers over the age of 19 of the private insurance kind had the same costs on the average as non-smokers, then the smoking group would have a lower -- costs would be lower; meaning they started out higher by that amount.
BY MR. HAMLIN:
Q. Well, who pays more on average, the smokers or the non-smokers on private aid?
A. The smokers.
Q. And is the difference indicated on this spread sheet?
A. Yes.
Q. Is that difference $340,391,439?
A. Yes. It's not the difference of the averages, but it's how the average works through the more elaborate calculation involving pots; age groups and sex groups.
In your original question you said it was the smoking cost; you didn't say difference and I was

trying to fix it up.
Q. So it's not just smoking costs, it's the overall costs?
A. No. It's a difference that would occur under a hypothetical if smokers had the same average cost as non-smokers.
Q. Now, you also did a calculation in the private insurance group for those 35 and older, right?
A. Yes.
Q. And that also appears on the second page of the exhibit?
A. Oh, the private insurance, right. Second page.
Q. Private insurance. Again, you've compared average costs of smokers and non-smokers?
A. Yes.
Q. And what was your result?
A. That if smokers had in this particular group -- had the same average cost as non-smokers, then there would be a difference of $281 million which would be interpreted as the smokers started out more expensive; summarize it like that.
Q. So, in other words, smokers paid more, right?
A. That's -- that confuses things because the numbers of the smokers versus the numbers of non-smokers.

Q. On average smokers paid more?
A. On average and in the context of this calculation, the smokers started out more expensive; I would agree.
Q. And your calculation shows that the difference, that is the increased cost for smokers 35 and over on private insurance was $281,067,420, correct?
A. That's the difference under the hype -- comparing actual to the hypothetical that I described.
Q. So smokers pay more in that particular group on private insurance?
A. They don't pay. It's a Medicaid payment -- insurance payment. It's not quite saying -- we have to be a little loose in the language; but when we wander too far, then I'm not comfortable.
Q. Smokers cost more?
A. Yes, that would be better.
Q. I'm perfectly fine with that phrasing. Now, you also calculated a confidence interval for both the 19 plus group and the 35 plus group on private insurance, right?
A. Yes.
Q. And the confidence interval for the 19 plus age group is $171,046,488 as a low and $509,738,390 as a high; is that right?

A. I think you misread, but close enough.
Q. What did I misread?
A. One of the digits in the thousands. It's I think close enough.
Q. For the 35 plus age group on private insurance, the confidence intervals went from 117,192,295 to $444,942,545, correct?
A. Right.
Q. Now, you also did a combined calculation of both public and private, correct?
A. Yes.
Q. If you could take a look at the third page of what looks like Exhibit 4881. Is that that combined calculation of public and private?
A. Yes.
Q. Let me ask you about the 19 and older age group. Did you find that on average smokers cost more for that age group?
A. Yes.
Q. And is the difference indicated on your spread sheet as $395,204,982?
A. Yes.
Q. Let me direct your attention to your supplemental report, and specifically page 3 where you mention the regression analysis that you did.

A. Okay.
Q. Now, according to your statement here, you say that this analysis finds no smoking attributable expense; is that right?
A. Yes.
Q. Now, let me ask you this: Did you look at the public aid sample of NMES as your source of data for this analysis?
A. Yes.
Q. And I'm going to be asking you a series of questions, and just so we're clear, Dr. Wecker, I'm going to be restricting my questions to this regression analysis.

So in doing this regression analysis you did not use any Medicaid or Blue Cross claims data; is that right?
A. You're referring to the pots? The input is the NMES public aid. I'm not sure I understood the question.
Q. Did the Medicaid or Blue Cross claims data, whether individual data or the pots, play any part of this regression analysis?
A. I think so. It's the plaintiff diminished health model with my changes, and I think in the plaintiffs' diminished health model we have those

pots. Let me look it up.
I think I'm correct about that; I think the Minnesota pots have to be a part of this because I find them in the calculation that I changed. Let me try to think about that over lunch and see if I'm making a mistake; but it's what it looks like to me.
Q. Now, in this regression analysis you say that you used the plaintiffs' diminished health model with your changes; is that right?
A. Yes.
Q. What changes did you make to the diminished health model?
A. I'm using a different input of NMES people to be just the public aid, and I'm including, unlike the diminished health implementation of plaintiffs -- so I'm excluding some people to get down to public aid, but I'm not excluding those with current treatment for tobacco-related disease, unlike plaintiffs.
Q. So you put the currently treated into that regression analysis?
A. Right. They're not excluded by me.
Q. And in the diminished health model, as presented by plaintiffs, the currently treated group is not included, right?
A. That's right.

Q. And they are the subject of a different model, right?
A. That's correct.
Q. Did you make any other changes?
A. In the regressions I included sex and age variables.
Q. And you're saying that the plaintiffs' diminished health status model there were not sex and age variables?
A. I think -- I'm not sure if they had an age variable, but I didn't think they had a sex variable or a sex group variable, and I included those.
Q. Well, you combined sex and age groups in this regression analysis, right?
A. Yeah. I was coming to that. I'm following the practice of not interrupting.
Q. So you did do that?
A. Say the question again?
Q. You did combine the sex and age groups in this regression analysis?
A. Right.
Q. You didn't break out separate sex and age groups for, let's say, women, 19 to 34, 34 to 64 and 65 plus, right?
A. That's correct. Instead of that I included sex

and age group variables.
Q. And you didn't fit separate equations for the age and sex groups, right?
A. That's correct.
Q. Now, the plaintiffs did, correct?
A. That's right.
Q. And you didn't do any separate calculations for lung cancer and COPD and the other major smoking attributable diseases the way the plaintiffs did, right?
A. Well, they didn't do it at all in this model.
Q. In this model you came up with one aggregate group which included those with major smoking attributable diseases as well as those with diminished health, right?
A. I looked at all medical expenses.
Q. For both of those groups; that is the group that was currently treated and the group with diminished health, right?
A. Regardless of that status.
Q. That's what you did, correct?
A. Yes.
Q. So you didn't draw any distinctions based on smoking-related diseases in your regression analysis, correct?

A. Except to the extent that the data informs with respect to those distinctions.
Q. But you yourself didn't impose any additional distinctions on the data, correct?
A. That's right.
Q. Now, in the plaintiffs' model the plaintiffs broke out expenditures by type such as hospital expense, correct?
A. Yes.
Q. You didn't do that in this regression analysis, right?
A. Well, they didn't do that in the regression analysis, but, anyway, I didn't do it the same way they did. But it's not a part of the regression calculation, even in theirs.
Q. But you didn't do it, correct?
A. Well, what I did was include the hospital, ambulatory, prescription drug and those categories as a combined category.
Q. Now, the plaintiffs broke out those types of expenditures in the refined model that dealt with, as the plaintiffs called them, the major smoking attributable diseases, right?
A. Yes.
Q. You didn't do this in this regression analysis,

right?
A. My regression analysis that we're talking about here was not guided by their -- or derived from their refined model at all, from their diminished health model.
Q. In your regression analysis you were attempting to answer the question whether smokers cost more than non-smokers, correct?
A. We struggled with that question many times. It can't be that simple. But in some sense, yes.
Q. Now, did you use any of the plaintiffs' age and disease screens in your regression analysis?
A. I'm not sure what you mean by that.
Q. Do you recall that in the plaintiffs' refined model they imposed age and disease screens to eliminate certain people?
A. Yes, in the refined model; but as I say, the calculation we're talking about has no connection to the refined model.
Q. Well, you do include in the calculation, that is your regression analysis, those who were currently treated, correct?
A. That's right.
Q. And they were the subject of the refined model that the plaintiffs presented, correct?

A. That is true.
Q. But you did not use any age or disease screens in this regression analysis that you did, right?
A. I'm not -- I haven't heard that term "screen" in the context here before, but there are age classifications involved in what I've done, and screens in the sense that 18-year-olds are not included. So maybe I have screens.
Q. Do you know what the plaintiffs' screens are for age?
A. I'm not sure if we're -- if I'm understanding your question.
Q. I'm just asking whether you know what the plaintiffs' age screen was in the refined model.
A. Well, I don't know it by that term, but if I'm thinking of the same thing you're thinking of, that in the refined model they began with 35-year-olds and not younger. If by screen you mean screening out those younger than 35, then I know exactly what you mean.
Q. Did they impose any other age screens beyond the one you just indicated?
A. I'm not recalling any other age screening.
Q. Do you know what the disease screen was that plaintiffs used in the refined model?

A. Well, there were -- the refined model breaks into two pieces; for short the lung cancer piece and the CHD piece, and they would be treated differently; those two are treated differently.
Q. Do you know whether the plaintiffs imposed a disease screen that essentially excluded people if they didn't have a disease such as lung cancer a certain number of times over a period of years?
A. That doesn't bring anything to mind.
Q. But you didn't impose such a screen in your regression analysis, right?
A. Well, I don't think so, but let me say why it's difficult to answer. I made certain changes to the diminished health model of theirs, and so the great majority of their entire apparatus is still there. So if there is something in there that corresponds to your question, it's still there. It's worth clarifying, I made no direct use of the refined model. So I would not have automatically carried over as a sort of legacy part of the refined disease model because that was not the way the calculation was done.
Q. Now, you used NMES cost figures for public aid in your regression analysis, right?
A. Yes.

Q. And you included costs, regardless of who paid the costs, right?
A. Yes.
Q. It didn't matter whether the costs were paid by public aid or by non-public aid, correct?
A. That's right. And it's also consistent with the way your experts did these calculations. I was following their lead.
Q. So in your regression analysis, you did not compare public aid costs to non-public aid costs, right?
MR. BIERSTEKER: Object to the form.
THE WITNESS: You mean costs paid by public aid for Mr. Jones as opposed to some other cost paid either by Mr. Jones or on behalf of Mr. Jones by some other entity?
BY MR. HAMLIN:
Q. Correct.
A. That's right.
Q. You didn't do that?
A. That's right. For clarity, neither did your experts, and I was following their basic -- starting with their computer program.
Q. Now, in your regression analysis you used four equations; is that right?

A. Yes. I'm counting four also.
Q. And were those equations for previous disease, correct? I'm going to take them one at a time. Previous disease, right?
A. I think we're talking alike. Has the doctor ever told you, yes.
Q. And you also had an equation for self-reported poor health?
A. Yes.
Q. And you also had an equation for whether there were any expenditures?
A. Yes.
Q. And then the last equation was essentially how much is the expenditure, right?
A. Yes.
Q. Now, would you agree that smoking was significant in the previous disease equation?
A. I don't know that as I sit here. I would have to check. You mean significantly significant?
Q. Yes.
A. I would have to check. I don't have that material.

MR. HAMLIN: Would you mark this?

(Wecker Deposition Exhibit No. 4882 marked for identification.)

BY MR. HAMLIN:
Q. Let me show you what has been marked as Exhibit 4882 which is essentially further output from the disks that you provided in connection with your supplemental expert report, and as we understand this output, it deals with the regression analysis that we have been discussing. Would you take a minute and just look at that?
A. Okay.
Q. Would you agree that that's at least a portion of your output for the regression analysis?
A. It appears to be.
Q. Let me direct your attention to the third page of Deposition Exhibit 4882. I believe this is the previous disease equation; is that right?
A. I think so.
Q. Let me direct your attention to the variable marked ever smoke. Do you see that?
A. Yes.
Q. And my question is whether or not this variable represents smoking in the previous disease equation.
A. Yes.
Q. And is it statistically significant?
A. By the assumptions and approximations involved in a particular column, the answer would be yes, but

I would --
Q. Which column are you referring to?
A. The column headed Z, Z variable. But it would be my normal practice to be -- to remain unconvinced at that point because there is some other issues that one would want to explore before one reached that conclusion.
Q. Specifically what number are you referring to?
A. 3.8.
Q. Let me direct your attention to the next page which is page 4 of the exhibit. Now, this appears to be the output for the reported poor health status equation; is that right?
A. Yes.
Q. Let me direct your attention to the variable marked PREVSTAR.
A. Yes.
Q. Now, does that variable refer to previous disease?
A. I think that's right, but I'm not sure. I would have to check it.
Q. Assuming that it does, is that variable statistically significant in this equation?
A. Same answer by the assumptions and calculations of the Z column the answer would be definitely yes.

But I wouldn't want to stop there; there would be further questions to consider.
Q. Let me ask you about the ever smoke variable in this equation. Do you see that?
A. I see it.
Q. Now, that variable represents smoking, right?
A. Yes.
Q. Now, the variable itself is positive at .44, correct?
A. .04.
Q. I'm sorry. .04?
A. Yes. That's what that little minus one means. They told you that once and you forgot.
Q. You're right. But it is not significant according to this --
A. According to the Z measure, right.
Q. -- Z measure, right?
A. That's right.
Q. Let me direct your attention now to the sixth page of Exhibit 4882. I want to ask you whether or not that is your NA expenditure equation for the regression analysis.
A. What's the fax number page?
Q. I think it's page 14.
A. I don't have a 14.

Q. I see page 14 at the top there and it looks like page 8 at the bottom. Page 8 in the right-hand corner. My question is whether or not this is the NA expenditure.
A. Yes.
Q. Let me direct your attention to the Health Star variable, about a quarters of the way down the first column.
A. Yes.
Q. That variable represents poor health, right?
A. That may well be correct, but that's something I would have to check. I don't remember the definition of that variable.
Q. Maybe at a break if you could check that.
A. Okay.
Q. Let's assume for the purposes of the question that it does represent poor health. Would you agree that it is positive and significant?
A. It's positive and significant by this particular measure which I cautioned about.
Q. Let me direct your attention now to the next page of Exhibit 4882 which is page 9 of the fax. Is this the size of expenditure equation?
A. Yes.
Q. Once again, let me direct your attention to

Health Star about halfway down the page on the first column.
A. Yes.
Q. Now, assuming that variable represents poor health, is that variable positive and significant?
A. It's positive and it's significant by the standard of the Z statistic which should properly not be the last word on this.
Q. Let me ask you this: Do you know whether the Health Star variable in this equation represents poor health or would you have to check that too?
A. I would have to make the same check.
Q. Could you do that as well?
A. Yes.
Q. Now, is smoking significant in either the any expenditure equation or the size of expenditure equation? If you could just take a moment. Let's look at the any expenditure equation first which is on page 8 of the fax.
A. No, not by the standard of the Z statistic.
Q. If you look at the size of expenditure equation on page 9, it's -- strike that. The smoking variable is not significant in that equation either, right?
A. Fax page 9?
Q. Fax page 9.

A. That's correct. That was one of the ones I was referring to in my last answer though, so I don't know. Maybe I didn't do the right thing in the last answer.
Q. Well, it may have been just a lack of priority in my question, but the question is really pretty simple and straightforward. The smoking variable in the NA expenditure or eyes of expenditure equations is not significant, right?
A. Not separately. I don't know what you would get if you did a joint test.
Q. I'm talking about separately.
A. And so not separately and not by the particular standard that's printed out here called the Z statistic which involves certain unrealistic assumptions. So it's a bit of an accrued measure.
Q. Now, would you agree that once you have a disease like lung cancer, that whether you're a smoker or not is not going to affect expenditures for medical care to treat that disease?
A. No, I don't agree with that. It might not.
Q. You say it might not?
A. I think it's an empirical question. I don't think I can answer that as a matter of principal.
Q. Well, let me ask you this: Have you ever

investigated to see whether or not when one continues to smoke once lung cancer is discovered has any effect on medical expenditures on to treat that lung cancer?
A. I have not made that study.
Q. Do you have any information to answer that question?
A. It's possible that I do, but I haven't thought about it so I'm not sure.
Q. So as you sit here today, you're not sure whether you can answer the question?
A. I'm sure I can't answer the question today, but there is a lot of data involved in this matter and available more generally so I wouldn't be surprised if that question could be meaningfully addressed. I don't know it.
Q. Now, we ran your programs, but we didn't find any results for the regression analysis. Did you actually calculate results --
MR. BIERSTEKER: Object to the form.
BY MR. HAMLIN:
Q. -- in terms of dollars?
A. Yes. I'm surprised. I thought you had that. I have the output here, so if there is some difficulty your expert is having, this may help him.

Q. Well --
A. Let me add. I understand the difficulty of going both ways of communicating this information. Say if that -- if there is a problem with that, I stand ready to help him out.
Q. Perhaps at the break we can mark your exhibits and then you can just identify them for the record. I don't want to take up the time in the deposition now to do that.
A. I don't think it's a practical way to solve it anyway. It seems like it's sort of an expert thing, but I have sympathy for experts, and if he can't find -- I think I cannot only stand ready, I could suggest ways to help him out to find that and be glad to do it.
Q. Can you tell me what your results were with respect to expenditures, if you have that in front of you?
A. I can read for you the total expenditures for 19 and above. Is that what you want?
Q. Yes.
A. It's 9,116,450,737.
Q. Did you calculate an expenditure for smokers 19 and above?
A. No, I don't have that number.

Q. So the number that you just gave me is total expenditures in NMES for persons on public aid 19 and above; is that right?
A. I don't think it's a NMES number. I think it comes out of your -- it's based on NMES data and also is based on the entire VHS calculation. Certainly, you know, it's a -- well, best answer is it's a -- although there is NMES data involved, you would be not correct to say it's the NMES data.
Q. Well, what does the number represent?
A. It's total pots. I thought you were asking me for a total, and that's -- my computer output is very cryptic here, and I'm just reading a variable called SUMVEP which I'm taking to be a total pot number.
Q. Now, did you break down that pot into separate calculations?
A. No, I don't have printed out here the answer to that question.
Q. You conclude, however, that your regression analysis finds no smoking attributable expense; is that right?
A. Yes.
Q. Now, do you have any basis in terms of dollar calculations to support that conclusion?
A. Yes.

Q. That's what I want to find out.
A. Well, then you're asking for the smoking attributable expense. Do you want me to read that?
Q. Yes.
A. The negative minus, 535,364,915.
Q. Is that for -- well, what group is that for?
A. 19 years and older.
Q. And that's everyone in this regression analysis, right?
A. Yes.
Q. Did you calculate confidence intervals for this regression analysis?
A. No. I certainly don't have them printed out, and I believe they're not part of the VHS programs. I definitely don't have them -- or at least I certainly don't have them on this tab.
Q. Now, in reaching that number, did you first predict expenditures for the sample as they actually are; that is smokers and non-smokers?
A. No, it doesn't work that way. Should I explain?
Q. Sure.
A. The sample -- what I have in mind in the sample is NMES public aid data which is being analyzed in the context of the plaintiffs' diminished health status broader calculation. That information is

basically squeezed down to some coefficients, and then the individuals are lost at that stage of the calculation. So the information survives in the form of certain regression coefficients that are passed to another part of the program.

Q. So you didn't treat smokers as non-smokers and then look at the difference in the smoking attributable expenditure, right? Strike that.

You didn't treat smokers as non-smokers and then look at the differences in expenditures in order to come up with the smoking attributable expenditure; is that right?

A. Well, there is a calculation that is -- of that character, but it is not done on the NMES sample. It's done on the -- let me track back. It's done on BRFSS.

Q. So tell me about that calculation.

A. The first thing you'd say is it's really very complicated, but the -- it's not my complicated thing, it's complicated the way it arrived from your experts. I'm trying to boil down the answers.

There is a point in the calculation where there is a subtraction, and the subtraction involves the expenses for a person -- I guess you would call them actual -- I wonder if that's right. Let me

think.

I think they're not actual; I think they're what a particular equation would calculate for them without changing any of the characteristics of the individual from what they actually are reported as. And then from that number is subtracted another number which comes from the same equation, except that there is a flag for smoker -- if the flag for smoker is set to -- ever smoker is slipped to never smoker, and the result of that subtraction is a smoking attributable expense, that's really the thing of the somewhat complicated calculation --

Q. You have a set of notes that you're referring to. Can you tell me what that is?

A. Yes, the same ones that you've already looked at and I think are marked. It's my notes on this diminished health calculations. They were present at the last deposition.

Q. Do you have notes that you're referring to that we did not mark at the last deposition because you have created them after?

A. Yes, I have lots of them.

Q. But the notes that are in your lap, are those notes that you've created since your last deposition? I'm talking about the loose pages.

A. Good. That makes it easier. The red marks that have been written on the black and white material is -- are marks that I made since the last deposition. This that I'm showing you is a loose note that I'm not making any use of, but I just didn't throw it away so it's in the pile. Unless you want it, I'm going to throw it away.
Q. What else do you have?
A. I'm looking. There are several pages that are identical to what you had before and there is others where I have added some red marks.
Q. Why don't we do this: Let's just mark this as a group exhibit.
(Wecker Deposition Exhibit No. 4883 marked for identification.)
BY MR. HAMLIN:
Q. I show you what has been marked as Deposition Exhibit 4883. This is a group exhibit of eight sheets of paper which bear your handwriting; is that right?
A. Yes.
Q. Now, you produced this information at the last deposition, but since that time you have included some additional writing --
A. That's right.

Q. -- on portions of those pages, right?
A. Right.
Q. Which of the pages refers specifically to the regression analysis that you reference in your supplemental expert report?
A. None of them. But some explanation would help.
Q. Sure.
A. These notes are notes of my understanding in a diagram of the plaintiff models. One of the plaintiff models is the diminished health model which would be diagramed on the last page of this exhibit. And I was referring to it in the context of your questions about what we're calling for short the regression, because that analysis begins with and makes important use of the plaintiffs' diminished health plan.
Q. Now, you have a notebook in your lap. Does that notebook include the results from the regression analysis?
A. Yes.
Q. And has that entire notebook been marked as exhibit from the last deposition?
A. No, this is all new.
Q. Why don't we mark that notebook.
(Wecker Deposition Exhibit No. 4884 marked for

identification.)
BY MR. HAMLIN:
Q. I want to show you what's been marked as Deposition Exhibit 4884 which is a notebook. Could you review for me the caption on that notebook?
A. Yes. I've written on the spine of the binder WEW underscore 2. For short, think of it as book 2. It says output from WEW computer code produced 98/01/15. That's a date. It goes on to say it's produced with the WEW supplemental report.
Q. Now, you said that there are results from the regression analysis in that notebook. Where are they? Are they under a specific tab?
A. Yes. They're under tab 15.
Q. Does tab 15 -- could you turn to tab 15?
A. Okay. I have tab 15.
Q. So there are two pages under tab 15?
A. Yes.
Q. Can you just read the title of the first page?
A. Smoking attributable expenditure and totals 19 years and older.
Q. And then the second page has the same title?
A. Yes.
Q. Different output?
A. Right. It's the same.

Q. Now, are the actual underlying calculations contained in the notebook as well?
MR. BIERSTEKER: What do you mean, Tom?
THE WITNESS: The computer program is the underlying calculation. The programs are not here. They're provided in electronic form. That's the way I keep them, electronic form.
BY MR. HAMLIN:
Q. Now, let me ask you some questions about the regression analysis. Why don't we go back to Deposition Exhibit 4882 which is that output from the regression analysis.
Now, you've already indicated that your equations include people currently treated for major smoking-related diseases, right?
A. Yes.
Q. Are you aware that your equations also include a Mill's ratio for being in the not currently treated group?
A. Yes. That's a legacy for me; plaintiffs' calculation.
Q. Did you consciously leave that Mill's ratio in the equation?
A. Yes.

Q. Do you know whether or not that is correct to leave it in when you also include people who are currently treating?
A. My opinion was they were never correctly implemented in the first place by plaintiffs; but since they did it, I left it there.
Q. Now, did that Mill's ratio come from plaintiffs' refined model or from the diminished health status model?
A. I believe it is a legacy from the diminished health status model. Just so we're on track here, maybe we could look in 4882 and see what it is you're referring to so we're both talking about the same thing.
Q. Yes. Why don't we turn to page 9 of the Exhibit 4882 and let me ask you this: Is the variable LAMBDACD the Mill's ratio? It's about three quarters of the way down the page.
A. I think it is. I'm going to have to check that to be sure, but I think you're right.
Q. Now, let me direct your attention to the previous disease equation which I believe is at page 5 of the Exhibit 4882. Do you see that?
A. Yes.
Q. Now, if you look down the column of the

variables there is no gender term in the previous disease equation. Is that a mistake?
A. Well it's at least a confusion that I'll have to check on. I thought I had a gender variable here, and so I don't have a good way to clarify the question. That's another thing I'll see if I can figure out over lunch.
Q. Could you take a look at the reported poor health status model which is on the next page, page 6 of Exhibit 4882?
A. Yes.
Q. Now, there is no gender variable in this equation either. Can you tell me whether that is an error?
A. I cannot. I'll see if I can pursue it before we leave.
Q. I take it you intended to include a gender variable in the reported poor health status equation, right?
A. That's my recollection, that there was one. Until I investigate, I'd rather not make a guess as to what a good answer to your question is; but I'll try to get you the answer shortly.
Q. Let me ask you some questions about the SAFs that you calculated for the Medicaid recipients.

Now, as I understand it, you claim you used the Zeger models to predict smoking attributable fractions of medical expenses for the Medicaid recipients who were deposed in this matter, right?
A. I haven't yet figured out where you're inquiring. Is this a new topic?
Q. This is a new topic. Page 5 of your report.
A. Okay.
Q. Do you see the section marked "Omitted information"? You talked about you did an examination of 15 individuals in the Medicaid population, correct?
A. That's true. I haven't found where I said it yet. Just a moment. Let me review that. Okay. I'm with you now.
Q. As I understand it, you say that you used Zeger's models to predict smoking attributable fractions of medical expenses for the Medicaid recipients who were deposed, right?
A. Yes.
Q. And this was supposed to illustrate the inadequacies of the factors included in the Zeger models, right?
A. Yes, that's one thing it would illustrate.
Q. Now, let me show you Trial Exhibit 1511 which is

entitled "Smoking Attributable Expenses Predicted by Plaintiffs' Model for Deponent No. 5." Let me read that again. Trial Exhibit 1511 is entitled, "Smoking Attributable Expenses Predicted by Plaintiffs' Model for Deponent No. 15." Do you see that?
A. Yes.
Q. Now, this is one of the calculations that you did have SAFs for one of the Medicaid components, right?
A. Yes.
Q. And just so we're clear, is this for Mr. Collins? I just want to make sure we're talking about the same person.
A. I don't know if I have the names.
Q. You don't know if you have the names?
A. I can be helpful with respect to making sure we're talking about the same person. Could we take a short break?
Q. Sure.
(Recess taken.)
BY MR. HAMLIN:
Q. So you checked the name and the name is correct; is that right?
A. The name you said is the name that corresponds to No. 10. Whether they gave it a false name or not,

I don't know. I mean No. 15.
Q. Now, when you applied the plaintiffs' model did you apply the age and disease screens in the plaintiffs' model?
A. If I understand that question correctly, that part of the process in the plaintiffs' model would have occurred prior to the point where I -- where either I or plaintiffs injects an individual. Let me pause for a minute.

I'm not sure I understand the question, but if I do, then I'm correct that to the extent that those things you're calling a screening were present in the model already; I haven't taken them out.

Part -- the part of the model where I do this calculation is right in the middle of it, and the screen part is up at the beginning of it.
Q. What year or years of data did you use in doing the calculation that appears in Trial Exhibit 1511?
A. You mean like -- let me see if I understand the question. You mean like NMES '87? What do you mean by the year of data?
Q. Well, specifically the claims data for Deponent No. 15. What years of the claims data did you use?
A. Deponent 15 data, I'm reading from part of my computer output that lists the input data for this

calculation for the 15 people, and I see a year of 1988, but I would have to check to see if that means we're talking about 1988 data or not.

I'm pretty sure I understand the question, but let me just -- to check on it, for example, one of the items that are indicated as an input for this Deponent No. 15 on XX1511 is that their age is 65. There is a year, calendar year, in which they are 65 and you're asking what's that calendar year, no?

Q. Well, I am specifically now asking what claims data you used in order to come up with the predicted smoking attributable expense SAFs that appear on Trial Exhibit 1511.

A. With respect to the input data, but particularly with respect to the claims part of it, okay? I'll nail that down to see what year of data that was. The only indication I have here -- and I've forgotten that detail, but it says year '88. That may be the answer, but I don't know for sure.

Q. Do you know what year or years of claims data the plaintiffs used in their models for this individual?

A. They wouldn't have used this individual.

Q. This person does not appear in the plaintiffs' model at all?

A. I wouldn't expect so, no. As a -- highly unlikely coincidence is possible, but that would be a coincidence.
Q. Why don't you think the plaintiffs included this individual in its model, their model?
A. I understand this individual to be 1 of 15 that were deposed in the course of this litigation. The -- it is possible, but it would be not necessarily true, but if this person was also one of the people who was surveyed by the BRFSS instrument of the period being used or the NMES instrument, then this person would be included in both, but that would just be an accident.
Q. Is this person to your understanding a part of the Medicaid claims data base used by the plaintiffs in their models?
A. Their claims would be, yeah. To the extent that they had dollars paid by Medicaid, it would show in the pots.
Q. And do you know what years of claims data the plaintiffs used for this individual?
A. I see what you mean when you say "this individual", but it wasn't what I was thinking. So what year is the pots data, and not off the top of my head. I would have to try to look that up.

Q. Now, what age did you use for this Deponent No. 15 in your calculation which appears in Trial Exhibit 1511?
A. 65.
Q. Do you know what age was used in the plaintiffs' models for this individual?
A. I don't think -- again, by coincidence there may be -- it may be that this person was processed through their models, but I don't think so.
Q. Do you know what years of claims data -- strike that. Do you know what the age of this person, Deponent No. 15, that is included in the claims data used in plaintiffs' model was?
A. I think you mean how old was this person in the year in which the claims data piles were summarized and eventually used and --
Q. That's correct.
A. No. I won't know that until I figure out the answers to these earlier questions of timing.
Q. For the purpose of my subsequent question, assume that I am referring to the Medicaid claims data that references deponent No. 15, right?
A. Assume that when you say what?
Q. For the purposes of my subsequent question.
A. I'm sure this is not going to work. Why don't

we -- we'll give it a shot.
Q. Let me ask you this: What medical conditions did this person have that formed the basis for Trial Exhibit 1511?
A. I can tell you the answer to what the medical conditions this person has because it's really a separate matter from this exhibit. Do you want to know that? Do you want to know what the medical conditions they had --
Q. Yes.
A. I have but I didn't bring -- but I bet you have the depositions of these people. In those depositions there are questions and answers describing their conditions and I think I had a summary of it somewhere in here also.
Q. Let me ask you this: Did you make any use of that information in calculating the SAFs that appear on Trial Exhibit 1511?
A. No, that's my point; plaintiffs' model doesn't use that information.
Q. So you didn't make any use of it in calculating your SAFs right?
A. The use I make of it is to complain that plaintiffs' models don't take it into account.
Q. Can you answer my question?

A. I thought I was.
Q. Did you make any use of the medical condition information that you had about this person in calculating the SAFs that appear on Trial Exhibit 1511?
A. Only to the extent that you might consider some of the items on Exhibit 1511 as medical conditions; overweight might be considered a medical condition.
Q. Did you take into account any other medical conditions?
A. No. Only the ones that the plaintiffs' model calls for in the particular calculation referenced on Exhibit 1511.
Q. Now, what was the basis for your conclusions about what medical conditions Deponent No. 15 had? Was it the deposition?
A. Setting aside this exhibit you're saying?
Q. Yes.
A. Yes. My understanding of their medical conditions is informed by their deposition.
Q. Do you know whether Deponent No. 15 had lung cancer and COPD at any time during the period when they were on Medicaid?
A. Let me look it up. I see an indication of chest pain which may be responsive, and an indication of

spot on lung which if I'm following the question may be responsive. I'm not sure I'm quite with you. Abnormal EKG I have a note here.
Q. Well, does your record that you are making reference to have any reference to lung cancer and COPD for this deponent at any time during the period when they were on Medicaid?
A. I don't see those words, but I see words that would to me amount to that.
Q. Chest pain; is that what you're --
A. Abnormal EKG.
Q. Abnormal EKG; is that right?
A. That's just the same ones that I read to you a minute ago. And to clarify, you say whatever I'm looking at, it's Exhibit 1564 so there's no confusion here.
MR. BIERSTEKER: Demonstrative Exhibit 1564 as opposed to Deposition Exhibit.
BY MR. HAMLIN:
Q. Tell me about Demonstrative Exhibit 1564. Does that have the same basic information that you used in calculating the SAFs for Deponent No. 15 that appear in Trial Exhibit 1511?
A. It has some of that information, but evidently not all of the information on it. The information

overlap a lot, but they're not identical.
Q. And did you put together a lot of that information?
A. Not myself, but somebody working with me did.
Q. Do you know what the medical expenditures for Deponent No. 15 were in 1988?
A. I don't see that information. I've got another place to look.
MR. BIERSTEKER: May I ask for clarification on this question? Do you mean the predicted expenditures or the claims data expenditures?
MR. HAMLIN: I'm talking about claims data.
THE WITNESS: I don't see the claims data information printed out here.
BY MR. HAMLIN:
Q. Did you make use of the claims data use information in calculating the SAFs that appear in Trial Exhibit 1511?
A. I don't think so.
Q. Did you make any use of the claims data at all in preparing Trial Exhibit 1511?
A. Yes.
Q. You did. What use did you make of the claims

data?
A. Well, the Exhibit 1511 is making use of the plaintiff CHD stroke model.
Q. When I talk about claims data, I'm talking about basic Medicaid claims data for the Deponent No. 15 for the years which they received Medicaid. Do you understand that?
A. You mean as distinguished from pots?
Q. As distinguished from pots.
A. Well, with that in mind, I think the answer is no, but let me check again. Your calculation is quite complicated in that one. Let me take a look. I think not.
Q. Did you use the claims data as a check to see whether or not the SAFs that you calculated in Trial Exhibit 1511 were reasonable?
A. At least I don't recall doing it. That may be something we did, but I don't have a recollection of it.
Q. So would it be fair to say you don't know how much this person had in medical expenditures for 1993?
A. I don't have it in my head. I may have that information.
Q. But you didn't make any use of it in preparing this trial exhibit, right?

A. No, it doesn't make use in figuring in the preparation of the trial exhibit.
Q. How did you determine this variable of weight that appears as one of the input factors in Trial Exhibit 1511?
A. Those are plaintiffs' defined variables using their definitions.
Q. But how did you arrive at the indication that this person was severely overweight?
A. By -- that's a category; severely overweight is a category. And even a variable name the plaintiffs have constructed, and we followed their construction.
Q. How did you make the determination to put Deponent No. 15 into that category?
A. By looking at the weight of the deponent -- of this deponent. If I remember their height figures -- I've forgotten exactly. Following the prescription, if I understand, that is the prescription laid down by your experts.
Q. Was there a record or a document that you looked at in order to determine this person's weight?
A. Yes.
Q. What was that?
A. The only thing I'm going to have here is a summary of that, but I'll find that if you're

interested.
Q. Well, was it part of their medical record that you looked at?
A. Just a moment. Backing up one step from the chart 1511, I'm looking at my input data for that, and I had a variable name for weight, and for Deponent ID 15 I see weight is 225 pounds.
Q. I'm asking you where you got that from, that's all.
A. In the first instance for this calculation I got it from this file here. Then if we want to know where I got it -- how this file got it, I would go back yet another step - and I have that material here - and that is the spread sheet format. But anyway, if I find it --
Q. Can you identify the basic source that you used for that information?
A. Maybe you're getting hungry over there. I'm giving you the best answers I can and I'm working back in the trail. I don't have anything here that would go back beyond the place that I've gone in the trail, but I believe -- if I had the deposition here, I would look there and see if it says it in there, and then that would, I believe, be the source that preceded the two that I mentioned.

Q. Did you review the deposition and record that information?
A. I've reviewed some of these depositions, but I actually didn't do the work myself for the -- comprehensively; I had other people doing that. But I've had the depositions in my hand and I've looked at highlighted information about these things.
Q. So staff members took that information from the deposition and medical records and basically included it; is that how it worked?
A. No. Since I wasn't physically present, I would think that must describe it generally, but I asked that that information be put into a computer file and in a systematic way for making this calculation, and I believe that the deposition is our source for that. But if I'm wrong about that, I'll let you know.
Q. Now, in Trial Exhibit 1511 you indicate that there is a home health smoking attributable fraction of 62 percent. Do you see that?
A. Yes.
Q. Do you know what this person's home health expenditure was during the entire time they were on Medicaid?
A. Certainly not off the top of my head.
Q. Have you checked?

A. We may -- we may have that information, but I don't recall the information as I sit here.
Q. Would it surprise you to learn that it was zero?
A. I don't know. It may well be zero.
Q. Did you go to any of the BRFSS cells in the plaintiffs model to see what the model calculated for persons with characteristics similar to deponent in number 15?
A. I don't understand that question.
Q. Do you have any understanding of the BRFSS cells in the plaintiffs' model?
A. Which model?
Q. The CHD model because that's the one involved with 1511, which is the refined model as I understand it.
A. It's a piece of it. Now, I'm about to answer your question about cells, BRFSS cells. The point where the calculation is made corresponding to chart 1511, the calculations not preceding by BRFSS cells. It's preceding by BRFSS person.
Q. So you did not use any of the BRFSS cells in calculating the SAFs that appear on Trial Exhibit 1511, right?
A. I really don't understand the question, but to the extent that -- I'll answer it this way: I'm not

using a BRFSS cell to do this; I'm using an individual. If I ever figure out what you mean by the cells, maybe they're involved elsewhere in the calculation, but I think they may be categories that are used subsequent to the calculation therefore they wouldn't be influencing this.
Q. Do you know what the SAF was for this particular deponent with these characteristics in the plaintiffs' model was?
A. Yes, it's the one I calculated.
Q. Do you know what the overall SAF was?
A. What does that mean? I'm not sure.
Q. For this individual do you know what the SAF was?
MR. BIERSTEKER: Object to the form.
THE WITNESS: I don't understand the question because the calculation doesn't do that. It makes a separate calculation for each of these categories.
BY MR. HAMLIN:
Q. Did you go back and check -- well, let me put it this way: You didn't go back and check to see what the BRFSS cell SAF was for individuals with characteristics such as deponent No. 15, correct?
A. You're going to have to clarify for me what you

mean when you call it -- when you say cell SAF. That is not a term that I've used in my analysis of this program.
Q. Do you know whether SAFs are calculated in any of the BRFSS cells in the plaintiffs' model?
A. What do you mean by BRFSS cell?
Q. You don't have any understanding of that term?
A. No, it's not a term I've used when I have studied this thing. I can tell you what I understand of it and I probably can tell you what you're talking about, but it's not a term I've used.
Q. You didn't go back to and check to see whether a group of individuals with characteristics similar to those of deponent 15 had a SAF calculated in the plaintiffs' model?
A. SAFs -- if we're thinking alike, I'm not sure, but the SAFs are calculated by individual, by BRFSS person. By expense category. That's how they're done; they're not done any other way. They're done one person at a time.
Q. They're not done in cells?
A. No. They're done one person at a time.
Q. And cells have absolutely nothing to do with calculation of the SAF; is that right?
MR. BIERSTEKER: Object to the form of

the question.
THE WITNESS: If you teach me what you mean by cell, maybe I can figure out what you're talking about. But at the point where the smoking attributable expenses are calculated -- oh, maybe I'm figuring out what you mean. Let me look subsequent to this.
I'm going to take what I think's a good guess of what you mean by the cells. This individual is assignable to a cell, but -- and some of the characteristics of the cell will be influential to the SAF, but they are accounted for in the calculation.
BY MR. HAMLIN:
Q. Let me direct your attention to the hospital SAF on Trial Exhibit 1511.
MR. BIERSTEKER: Do you want to take a break for lunch?
MR. HAMLIN: Sure. Let me finish this.
BY MR. HAMLIN:
Q. Let me direct your attention to the hospital SAF on Trial Exhibit 1511. Do you see that?
A. Yes.
Q. What year does that SAF reference? Is it the

year that this person was 65 years old?
A. Well, I'm trying to think of the best answer for that. In the first instance it's what you get when you put the information on the left, including age 65, into the calculation.
BY MR. HAMLIN:
Q. Do you understand what I'm asking you? Is what year that information --
A. Calendar --
Q. What calendar year that claims information came from in order to calculate that SAF?
MR. BIERSTEKER: Object. It mischaracterizes the prior testimony which I think has been that the witness' understanding is that the claims data were not used to make that calculation.
BY MR. HAMLIN:
Q. Let me ask it this way: Forget about claims data. What information from what year was used to calculate the hospital SAF that you have on Trial Exhibit 1511?
A. Part of the information for this individual, and I've told you, I'm -- well, I have a -- I do have date of birth. I hope at lunch I can find that and I can actually figure out in what year they are 65, because I believe that there is a date of birth

information here.
Q. Now, does that SAF apply to the age -- strike that -- the year that they turn 65?
A. I don't think it applies to anything. The whole point of this is this is an unsatisfactory reliable calculation that I wouldn't want applied to anything.
Q. In coming up with the SAF of minus 105 percent for the hospital, does that SAF reference the year the person turned 65 years old?
A. I think that would depend on how one would intend to use it. Plaintiff's -- don't laugh.
Q. I'm not laughing. I'm just expressing frustration because -- I'm not trying to mislead you here. I'm not trying to trick you into anything. I'm just asking you a simple and straightforward question.

You have a SAF here of minus 105. Does that represent the SAF for the year that the person turned 65 or does it represent a SAF for some other year. That's really all I'm asking, Dr. Wecker.
A. The point that I'm trying to get out, which makes the question not as easy to answer as you might think, is that when this SAF is used -- a SAF is used -- this SAF doesn't get used by the plaintiffs' calculation at all; this is just mine.

But when a SAF something like this is used, it's applied to all kinds of different years, and sort of as if it's broadly applicable. So if we go down that trail in the answer, we could see how SAFs like this are used and what is the assumption implicit in their use as to where they are applicable.

But that's not what I'm doing; I'm not running out and applying this to some other information. I'm just saying if you use this input, you get this answer.

Q. What I'm asking you is in order to get the output of a SAF of minus 105, what did you factor in as the person's age?

A. 65.

Q. And did the data that you use relate to the claims data for when that person was 65 years old or not?

MR. BIERSTEKER: Object to the form.

THE WITNESS: Their claims?

BY MR. HAMLIN:

Q. Yes.

A. I'm not using their claims.

Q. And it's true, isn't it, that for all of the deponents for whom you calculated SAFs, you never

used any of their claims data from the Medicaid files, right?
MR. BIERSTEKER: To calculate the SAFs. Is that your question?
BY MR. HAMLIN:
Q. To calculate SAFs.
A. To Cut it short, if you mean specifically theirs as opposed to possibly some aggregate that I would have to think about for a minute, the answer is right, I didn't because it's not called for as an input to this model.
Q. Did you check whether any of the hospital SAFs calculated in the plaintiffs' model for this person were minus 105 percent?
A. I don't think the plaintiffs used this person.
Q. So your testimony is that there is no SAF for this person in the plaintiffs' model; is that right?
A. Plaintiffs may find a SAF that they have calculated that they would suggest would be applicable to this person, but that's not how I interpret your question. I don't believe, though it's possible as a coincidence. But I don't believe that this person is one of the people that was processed through this model by plaintiffs.
Q. You're not suggesting that the hospital SAF of

minus 105 percent is a SAF that the plaintiffs calculated for this person, correct?
A. Right. I calculated.
Q. This is your calculation, right?
A. It's my input to their model. Do you people eat in Minnesota?
Q. I want to finish this and then we can go. Have you checked plaintiffs' model to see what any of the hospital SAFs calculated for this person were?
A. They don't have this person.
Q. So you haven't checked?
A. I don't have to check. They don't have this person.
Q. So if I told you that the SAFs were different in the plaintiffs' model from what you calculated, that would be a surprise to you, right?
A. No. Their numbers are frequently all over the map. If we turn to Exhibit 1511, you see other numbers, or 1513 you see other numbers.
Q. What I'm asking you is very simply, if I told you that the SAFs for hospital, ambulatory, prescription and home health for Deponent No. 15 calculated by the plaintiffs were far different than the ones that you calculated would that surprise you?
A. The part that would surprise me is that they've

calculated the SAF for this person. I don't believe they did.
Q. In any case, you never checked that, right?
MR. BIERSTEKER: Checked what? Object to the form.
THE WITNESS: Checked that they've calculated for this -- well, I can -- well, I guess I haven't. I can look through the BRFSS person data and see if I see correspondence, but I doubt that we're going to see that.
I have a further elaboration, if I may. If I checked for that BRFSS data and looked for these same inputs, I'm going to get exactly the same answer; I can tell you that much.
BY MR. HAMLIN:
Q. And if I told you that the plaintiffs model calculates something far different would that be a surprise to you?
A. It would suggest that they have a different interpretation in mind. And maybe on understanding their interpretation, I could see their point of view, but until I hear it, I don't know exactly what they had in mind.
MR. HAMLIN: Let's break.
(Recess taken.)

(Time: 12:35 p.m.)
(Wecker Deposition Exhibit Nos. 4885 through 4887 marked for identification.)
BY MR. HAMLIN:
Q. Dr. Wecker, I want to show you some deposition exhibits that have been previously marked while we were off the record. First is Deposition Exhibit 4885. That's a notebook. Can you tell me what that is generally?
A. Yes. A notebook containing my January 15 supplemental report, my affidavit and plaintiffs' supplemental report.
Q. Can you see the next deposition exhibit? It should be 4886. I want to show you a notebook that bears Deposition Exhibit No. 4886 and it's titled "WEW Exhibits MN AG April, 1998," correct?
A. Yes.
Q. Can you tell me just generally what is in that?
A. Exhibits beginning with X1477.
Q. These are trial exhibits?
MR. BIERSTEKER: Demonstrative.
BY MR. HAMLIN:
Q. Can we go to the next exhibit? I show you what's been marked as Deposition Exhibit 4887. It looks like it's titled "WEW - 3 Wecker supplemental

and material/output and spreadsheets," correct?
A. Yes.
Q. Can you tell me just generally what that is?
A. Computer output and spreadsheets.
Q. Is this for the supplemental report?
A. I don't -- it's -- I'm not sure. It's just miscellaneous, I guess. I'm not sure how to connect it up as a whole.
Q. Do you have any further exhibits that we have marked?
A. Yes, there is one more.
Q. Dr. Wecker, we have marked your work papers which you have generated since your last deposition?
A. Yes. Unless as I discussed, I have made additional marks in my old exhibits, and I don't know the answer to that.
Q. Let me direct your attention now to your supplemental expert report which has been marked as Deposition Exhibit 4878. Now, you make reference to a nursing home analysis on page 5, correct?
A. Yes.
Q. Now, the program which was identified in Mr. Biersteker's letter of March 31, 1998 does not calculate any SAFs or smoking attributable expenditures. For the record, that program is

NHEXPAGEDOTJAKHEFS.SAS. If you could just check your records and see whether or not we could get the program or programs that actually calculate SAFs and smoking attributable expenditures for this particular nursing home analysis on page 4 of your report, I'd appreciate it.

Let me ask you this question: In this nursing home analysis, you used NHANES data, correct?

A. Yes.

Q. Did you set the sampling weights to one?

A. I did that with one of the calculations. Could we stop for a minute and maybe go off the record? I haven't got your request.

MR. BIERSTEKER: I'm confused about what those calculations are.

MR. HAMLIN: Let's go off the record.

(Discussion held off the record.)

BY MR. HAMLIN:

Q. For the nursing home analysis in your expert report, did you set the sampling weights to one?

MR. BIERSTEKER: Object to the form of the question.

THE WITNESS: Well, I've done more than one nursing home calculation, but in one of them I did.

BY MR. HAMLIN:
Q. Let's talk about that one.
A. Okay.
Q. In that calculation did you find that the state paid no expenses attributable to smoking?
A. That's my recollection, but I got to find it to make sure. Yes.
Q. Did the --
A. Weight. Is this part of the program you couldn't find? I could show it to you.
Q. Can you just tell me what notebook it's in?
A. Yes. It's on tab 12 of Exhibit 4884.
Q. 4884?
A. Right.
Q. Now, did that analysis where you set the sampling weights to one replicate plaintiffs' model except that you changed the sampling weights?
A. Yes.
Q. Did you do any other nursing home analyses?
A. Yes.
Q. And can you tell me how many you did?
A. Well, I'll try to recall. I've done one replicating the 60- to 90-year-old of plaintiffs, and I've got another one where I exclude persons with Alzheimer's or Parkinson's.

Q. Let me ask you about the replication of the 60- to 90-year-olds. Did you reach a result different from what Dr. Wyant testified to?
A. I don't think so. I think we were able to figure out what he did.
Q. Now, is it true that almost all government surveys have sampling weights?
A. I don't think one could say that; but it's true often.
Q. Does NMES have sampling weights?
A. Yes.
Q. Did you use the sampling weights in your NMES calculations?
A. I believe, yes.
Q. Did you set those sampling weights to one in any of your analyses?
A. I don't think so.
Q. Are there any published studies that you can identify that recommend setting the sampling weights in NHANES to one in the primary analysis of the NHANES data?
MR. BIERSTEKER: Object to the form of the question.
THE WITNESS: I don't know what the primary part of the question means, but there is a

document that is part of the descriptive material accompanying NHANES that has a paragraph or two in it that discusses that issue, and as I recall, it recommends that as one of the things that can or should be done.
BY MR. HAMLIN:
Q. Now, when the sampling weights in NHANES are set to one, is it your testimony that that population is representative of the U.S. nursing home population?
A. No.
Q. Let me ask you this: Is there any published authority that you know of for the proposition that setting weights to one in NHANES is the preferred method in analyzing NHANES data?
A. No. The material I'm thinking about doesn't distinguish it as either the preferred or the not preferred; it doesn't pick a preference.
Q. So the answer to my question is you don't know of any publication that recommends as a preferred method that the sampling weights in NHANES be set to one, correct?
A. I think it's a fair reading of the material I'm recalling to say that a preferred method or a preferred -- at least a recommended sensible and good thing to do is to do that calculation.

Q. And does this document that you're referring to indicate that that's the only method to be used in analyzing NHANES data?
A. No, it is not.
Q. Is this a government publication that accompanies NHANES?
A. I think it is. If the next question is what, I can't give you that. I have it in my office. I could very quickly identify it for you.
Q. Could you do that and perhaps even send us a copy?
A. Sure.
Q. Now, sampling weights are calculated for NHANES data, right?
A. They are supplied.
Q. They are supplied?
A. Yes.
Q. And they are meant to be used, right?
A. Well, that's the issue; they're not meant to be used to the exclusion of alternatives that would not use them. I thought of an easier to say that. It's not suggested that they be exclusively used.
Q. Now is it your testimony that the plaintiffs nursing home model is wrong because it used the actual sampling weights supplied by NHANES?

A. No, I don't think that element by itself makes it wrong.
Q. Can I ask you this: You have in your expert report a section about the use of the core model --
A. I'm sorry I'm interrupting, but I wasn't listening anyway so you might as well -- I was still thinking about the last thing.
It may -- I'm about to say to your question, is it my testimony that it may well be that the weights in this particular application cause a wrong result, that may well be true.
Q. Have you reached that opinion as you sit here today?
A. I have not because there are so many other things that are going on that I think are also sources of error that it's not possible for me to parse out which factor might be responsible for which portion of the error.
Q. Let me ask you this: With respect to this nursing home analysis where you excluded Alzheimer's and Parkinson's, what was the basis for excluding those two conditions?
A. It's my understanding that those are not conditions that are -- that are attributable to smoking.

Q. And what's that understanding based on?
A. Well, it's been a part of my background and knowledge for years so I'm not sure where I first heard it, but I think it's been mentioned by one of your experts in this case.
Q. Well, have you made any investigation of the literature on whether or not Parkinson's is caused by smoking?
A. I'm sure at sometime, but I can't put my finger on it. I've seen literature that says the opposite; it says it's protective. I'm a statistician so I don't use the cause word. I use the association concept. So I mean protective in that sense.
Q. And did you make any kind of a study in this case of the literature on Parkinson's and smoking?
A. No, I don't recall that I did.
Q. Did you make any study in this case of the literature on Alzheimer's and smoking?
A. I may have looked at an article, but I can't think of one. I do recall a statement by one of your experts. I just can't remember which -- it might have been Samet.
Q. And what was that statement?
A. It was consistent in supporting of the view that smoking is protective for those particular conditions.

Q. So it's your testimony that Dr. Samet testified that smoking was protective of Alzheimer's and Parkinson's?
A. We don't need my paraphrasing or recollection of his testimony; it is what it is, but it was essentially that or at least was consistent with that understanding that I had.
Q. Now, let me direct your attention to page 3 of your supplemental report where you talk about the core model analysis applied to the entire public aid sample. Do you see that?
A. Yes.
Q. Now, we did get a disk on Thursday, April 16th of the core model calculation that apparently you reference at page 3 of your supplemental expert report. The disk with the information that we had prior to that time, as I understand it, was in error, right?
A. I don't recall.
Q. Well, do you recall rerunning it because of an error?
A. No, at the moment I don't. Let me look that up and see what I see. I don't actually recall the replacement you're talking about. It may well be true. I've just forgotten about that.

Q. Did you run this core model that you're referring to on the Blue Cross data?
A. I don't see any Blue Cross calculation.
Q. Do you know why you didn't do a Blue Cross calculation?
A. Because I was doing a public aid calculation.
Q. Now, I'm going to show you what's been marked as Trial Exhibit 30,153, and I'm going to indicate to you that that is a list of ICD9 codes that Dr. Samet supplied to the plaintiffs' damages' experts. Let me ask you this: What ICD9 code diseases and conditions did you include in this core model?
A. I've got a -- I can't tell you that from memory, but I think I have a list here somewhere. Speaking first in a summary fashion, they're the ones on the list you just handed me, plus some more from the Surgeon General's list. Would you like me to find the list?
Q. Yes.
A. I can point you to a program, but I don't have the electronic stuff here. Program OUT3C -- then I can't read my writing; if this is a 1 or an L. V2.SAS. If you look in that code, you should see the ICD9s.
Q. Now, in the plaintiffs' core model there were

two groups of diseases; lung cancer COPD and CHD stroke. Do you remember that?
A. Yes.
Q. Did you use those two groups in this core model estimate that you are referring to in your expert report?
A. They're included.
Q. What other groups did you include?
A. Including all health conditions.
Q. For all public aid people on NMES?
A. Right.
Q. And did you combine all the groups?
A. I have a combined result, yes.
Q. So you didn't break out the results by lung cancer COPD --
A. Separately you mean?
Q. Separately.
A. Those two things, no.
Q. Do you recall as part of your conditions you added cold or flu?
A. I think the answer would be yes. I don't specifically recall it, but I believe it would be.
Q. And in adding those ICD9 codes did you -- well, did you consult with an epidemiologist?
A. I think of myself as an epidemiologist so I

don't know what you mean. An epidemiologist, to get our terms traded here, to me is someone who uses statistical methods to study health questions.
Q. Did you seek the advice of anyone other than yourself in adding these additional ICD9 codes?
A. No.
Q. Are you relying on anything that Dr. Samet said?
A. I don't think I have a necessary reliance, but I wouldn't rule out that he said some things that might be consistent or supportive of this. But I didn't do it when you decided Samet decided to do it.
Q. Would you agree that the plaintiffs' core model was, at least as the plaintiffs present it, designed to identify some of the major diseases related to smoking?
MR. BIERSTEKER: Object to the form of the question.
THE WITNESS: Yes. I would agree with that.
BY MR. HAMLIN:
Q. Would you also agree that in the plaintiffs' refined model as well as in the diminished health status model plaintiffs added additional factors and controlled for those factors in order to determine the effects of smoking?

A. I'll agree they added additional factors.
Q. Do you have any understanding as to why they added additional factors?
A. In an attempt to adjust their estimates to deal with possible issues of confounding.
Q. Let me ask you this: Would you agree that it is more difficult to identify the consequences of a diminished health status that's caused by smoking versus the consequences of lung cancer caused by smoking?
MR. BIERSTEKER: Objection to form.
THE WITNESS: No, I wouldn't agree with that.
BY MR. HAMLIN:
Q. So both are equal in terms of identifying expenditures related to those conditions?
A. I don't think I'd rely on equal either. I'm just not ready to jump out and take a position on where the greater complication lies; both are complicated issues.
Q. But in terms of ranking --
A. You've got my answer. I don't know.
Q. You can't rank which is more difficult, finding the expenditures attributable to lung cancer or finding the expenditures attributable to diminished

health; is that correct?

MR. BIERSTEKER: Object to the form of the question.

THE WITNESS: No. There are complications in both and -- so I don't see an easy way to rank them. Part of the difficulty with ranking complications is that they -- complications are of a variety of kinds, and ranking is a phenomenon that requires this variety of complications which are different of kind and can be reduced to some scale or value and then compared. That's the challenge. I don't know how that could come out.

BY MR. HAMLIN:

Q. Well, in attempting to identify smoking attributable expenditures as a result of diminished health, would you agree that it is advisable to try to control for as many factors as possible?

A. Well, the way you pose the question, it contains its own answer. Sure, you should do whatever is possible to do, I would guess, within some scope of time and budget.

Q. In calculating the --

A. I don't think -- I'm sorry. You're asking me new things I haven't thought about so it takes me a

minute. I don't think that answer at all is special to diminished health.
Q. In calculating the expenditure for the core model that you did in your expert report, did you draw the third reduction in the NMES data?
A. I think so. Let me check. I almost got it. I haven't pinned it down in the spread sheet, but that's what I remember.
Q. Now, that's not what the plaintiffs did in their core model, correct?
A. It's not what they did.
Q. It's not what they did, right?
A. That's right.
Q. Plaintiffs used the Minnesota claims data for the third reduction, right?
A. Right.
Q. Now, the core model as the plaintiffs presented it used only public aid expenditures, right?
A. I don't think so.
Q. Strike that. As the plaintiffs presented the core model, they had estimates for both the State of Minnesota and Blue Cross, right?
A. Yes. I don't have it in front of me, but it's my recollection.
Q. Your core model applies only to public aid

expenditures, right?
A. I thought I had a Blue Cross calculation like that somewhere. It will take me a minute.
Q. Well, let me ask you this: In the public aid analysis that you did using the core model, you used the NMES public aid data, right?
A. Yes.
Q. Let me ask you this: What does the term "endogenous" mean to you?
A. It's a term -- do you have a piece of paper? It's a term describing a situation in a set of time with equations in which the left-hand side variables -- you have to have more than one equation now to do this. Left-hand side variables of the equations appear also on the right-hand side.
Q. Now, what problems do endogenous variables pose in building models?
A. Sometimes it's called the issue of simultaneity.
Q. Can you be a little more specific about the problems that the endogenous variables cause?
A. I don't think that they cause a problem which is fundamentally unique to that word. The basic problem is one of model specification.

And one way to have a model that is incorrectly specified is to have the wrong variables

in the wrong equations stated clumsily.

So the easier to understand the issue is that if you have a model that does not comprehend the right variables or the variables in the right form, you have a problem with specification and it can lead to a serious error. Really, no limit on the magnitude of the error, so specification is an important issue.

Q. In lay person's terms --

A. That was lay person.

Q. No. This is a different question. In lay person's terms, does endogenous mean essentially that the dependent variable affects the independent variable, as opposed to vice versa?

A. No, no. It means that the correct specification requires multiple equations, and that it isn't a question of that versus a vice versa. It's that multiple equations are necessary to comprehend the relationships. And in the spirit of what your question was saying, that in those multiple equations, some variables appear on both sides. Okay?

Q. Suppose you have a situation where what you're attempting to do is determine the effect of an independent variable on a dependent variable. So

you've got that situation?
A. Go ahead.
Q. But then you learn that the deep-ended variable may also have an effect on the independent variable. Could that fall into the category of an endogenous situation?
A. Yes.
Q. Now, you mentioned that you included the exercise -- strike that -- an exercise variable in one of your equations, right?
A. Yes.
Q. Did you get that exercise variable from NMES, specifically the NMES questionnaire?
A. I think so.
Q. If you can recall, was the question something along the lines of which comes closest to describing your physical activity, either one, I often spend at least a half an hour in moderate or strenuous physical activity three or more times a week, or two, I'm not very active when I'm at work or working around the house, and except for ordinary activities of daily living, I don't spend too much time in physical activities?
A. Let me -- I can look it up and see if I have it written down exactly.

Q. Well, let me just ask you this: I mean, does that sound generally like the NMES questionnaire? I've got it in my hand and I would be happy to show it to you.
A. I've seen the questionnaire and where it's possible would not be too much time to nail down the answer. I guess it would be better if we did that. And when I was speaking, I see that in addition to NMES data, I've also got an analysis here involving exercise that comes from a different source as well, so this --
Q. What source is that?
A. That's CPS II, Roman II.
Q. And did you use that information as well in this exercise that is part of your expert report with respect to putting in a variable on exercise?
A. No. I was just being complete, and because my first look found it, I was -- rather than lose it again, I thought I would show exactly where I got my exercise variable for this particular analysis.
Anyway, I'll -- you -- the book has been marked and I'll tell you for time purposes under tab 14 you'll find the questionnaire, and I believe I have the exercise thing circled somewhere in here so you can find it.

Q. When you say "questionnaire", is that the NMES questionnaire?
A. No. This is CPS II. So on the way to looking for the NMES one, I came across another one and thought I would mention it.
Q. This is not the questionnaire you used for estimating this variable in your expert report, right?
A. Correct.
Q. That's all I want to know. Now, would you agree that if a person is sick with bladder cancer he may not exercise?
A. It's possible.
Q. Would you agree that being terminally ill may cause a person not to exercise?
A. Possible.
Q. Does it matter to your calculation that some people may not exercise because they are ill?
A. No, I don't think so.
Q. Are there any specific terms in your equations where you included the exercise variable and got this reduction that address lack of exercise stemming from illness?
A. No.
Q. Why did you include the exercise variable in this analysis that you make reference to in your

expert report?
A. Because exercise is a very large factor in health and mortality. And to fail to comprehend it at all invites serious confounding.
Q. Do you know of any published studies of health care costs that discuss the problem of disease leading to a lack of exercise?
A. I can't think of one, but I imagine there would be some.
Q. Let me ask you about the depression variable that you use. Did you also get that from NMES?
A. Yes.
Q. Do you remember if the question that you used as a basis for this variable asked whether a person in the last thirty days had felt downhearted and blue?
A. That sounds familiar, but I was looking to see if I could be more specific.
Q. Let me show you a copy of that NMES questionnaire. Do you remember if that was the question? I think there is another one on the next page.
A. I remember down in the dumps.
Q. That's on the next page. Which one did you use?
A. I would have to check that.
Q. Okay.

A. So far I haven't found a document that will assure me of what that choice is. I may have it with me. I just can't find it.
Q. Do you remember if --
A. Maybe -- let me mark that down, and if we have a short break I might be able to find that.
Q. Do you recall if you used one or both of the NMES questions regarding feeling downhearted and blue and down in the dumps?
A. I'm not going to be able to tell you without finding it. I haven't found it so far.
Q. But it's one or the other?
A. No, not necessarily. It could be a composite. I'll have to let you know. Maybe it will happen today. If not, maybe it will happen Monday morning.
Q. When you use the term "depression" to describe your variable, are you claiming that this is a medical definition of depression?
A. No. It's just whatever that variable is.
Q. Whatever that variable is from NMES, right?
A. I think that's right.
Q. Now, would you agree that if a person is sick with bladder cancer he may feel depressed as a result?
A. It's possible.
Q. Would you agree that if a person has a terminal

illness the person may feel downhearted and blue and depressed most of the time?
A. Possible.
Q. Now, does it matter to your calculation regarding depression that some cases of depression may be caused by a smoking-related illness?
A. No, I don't think so.
Q. Do you have any specific terms in your equations that address depression stemming from illness?
A. No.
Q. What's the biggest problem in including a factor like depression in your equations?
A. I don't know what you mean.
Q. Well, why did you include depression in the model or your equation I should say?
A. It seemed reasonable to do so, and as I recall, plaintiffs had talked about doing it at some early stage.
Q. Is it reasonable because smokers have more depression than non-smokers; is that your understanding?
A. No. That may be true, but the -- that's not the point. The point is that in assessing attributable risks or attributable costs, the effect is important and other risk factors could show itself as a

confounding factor, and that's one of the major ones.
Q. When you say "it's one of the major ones," what's the basis for your statement?
A. I've studied health risks for years.
Q. Do you know of any studies of smoking and health that control for depression or mood?
A. I'm sure there are some. I can't name them. I know there are studies that show the importance of mood.
Q. Did you rely on any specific studies for your inclusion of depression in this equation?
A. No, I didn't rely on a specific study.
Q. Can depression increase medical expenses for a person who has a smoking-related disease?
A. Might or might not.
Q. Now, suppose NMES had the question -- just assume this for a moment. Suppose they had a question: Was your feeling downhearted and blue a result of illness or poor health, would you have controlled for this factor in your equation?
A. May I look at this?
Q. Certainly. You're looking at the NMES questionnaire?
A. Well, I was kind of wondering about your question when you say you want me to assume that.

Are you meaning to suggest that it's a fact?
Q. No, no, no. I'm just asking you to assume for the purposes of a hypothetical that NMES asked the following question: Was your feeling downhearted and blue a result of illness or poor health, and my question is: Would you have controlled for this factor in your equation on depression?
A. It might have or it might not have.
Q. Can you explain to me that answer?
A. Well, it's hard to talk about an analysis involving a variable when you haven't confronted the analysis or you haven't studied the variable.
Q. So it's possible that you could -- that you would control for a variable like that, right?
A. It's possible that I might have used such a variable in some demonstration, but you seem to have slipped me into a role that I never took on. I was just creating some illustrations of some problems with plaintiffs' models by including some variables that they hadn't shown that it makes large differences. I wasn't trying to trade jobs with them.
Q. But in your equation, which I take it was a test or a check of the plaintiffs model, if you had available to you the answer to this hypothetical question in NMES would you make use of it?

A. Might or might not. Same answer.
Q. So you don't think that that would be an important variable to control for?
A. Definitely getting into fine tuning seems -- and I can't answer it without looking into an analysis of whether that would be important fine tuning or not.
Q. Well, would it be important to know whether or not someone was depressed because they were sick?
A. Might not be important.
Q. Would it be important to know those who were depressed because they were sick and those who were depressed and then smoked as a result?
MR. BIERSTEKER: Object to the form.
THE WITNESS: You lost me. Maybe it's getting late. I just didn't follow you.
BY MR. HAMLIN:
Q. Would it be important to you to identify cases where smoking was caused by depression and then the smoking led to illness?
A. Sounds hard to do, I can tell you that much. I doubt that it would be important to me. It certainly sounds like a challenge.
Q. So that would not matter to your calculation that someone was depressed and then smoked and then got sick?

A. It wouldn't matter to the calculation I was doing for the purpose that I did it, no.
Q. And it wouldn't matter to your calculation if someone was sick with a smoking-related disease and then became depressed, correct?
A. No, I don't think it would. Can we take five minutes?
(Recess taken.)
BY MR. HAMLIN:
Q. Let me show you what's been marked as Trial Exhibit 26046. That's just a portion of this book which is entitled the Evolving Role of Statistical Assessments as Evidence in the Courts. Have you seen this book before today?
A. Yes.
Q. Are you familiar with Stephen Fienberg?
A. I know him.
Q. Is he a well-regarded statistician?
A. Yeah.
Q. Have you worked with him?
A. I haven't taught or anything. I've sat across the table and talked to him.
Q. Let me direct your attention to a portion of the exhibit that lists the members of the panel on Statistical Assessments as Evidence in the Courts.

Now, you were at the University of Chicago, right?
A. Yes.
Q. Do you know James J. Heckman?
A. Yes.
Q. He is or at least was at the time of publication of this book at the University of Chicago in the Department of Economics?
A. Right.
Q. Is he also well-regarded in his field?
A. Yes.
Q. Are you familiar with this panel?
A. You mean with the people?
Q. Yes.
A. Some of them.
Q. Who are you familiar with?
A. Well, I either know or know the work of Fienman, Heckman, Hunter.
Q. Fienberg or Fienman?
A. Fienberg. Heckman, Hunter, Meier, Segwell.
Q. Now, are all these people eminent and well-regarded in their field?
A. Yes.
Q. Was Paul Meier a colleague of yours at the Department of -- strike that -- at the University of Chicago?

A. Yes.
Q. And do you know Thomas J. Campbell from the law school at Stanford?
A. No, I don't know him.
Q. You were at the law school there for awhile, right?
A. I just finished teaching a course there. I'm not teaching one right now.
Q. Let me direct your attention to the page that's titled Committee on National Statistics, 1996, 1987. Do you know any of the individuals on the committee?
A. Yes.
Q. Can you tell me who you know?
A. I've either met personally or in some cases am familiar with their work, Fienberg, Berger, Seymour Geiser, Hasman, Juster, John Pratt. I haven't met Judith Tanner, but I've read stuff by her.
Q. Do you know Kenneth Wachter?
A. No, I don't know him.
Q. Are the people that you've just identified as people you know or are familiar -- or the fact that you are familiar with their work, are these people eminent and well-regarded in their respective fields?
A. Yes.
Q. Now, are you familiar with the Committee on

National Statistics?
A. I'm familiar with certain individuals.
Q. Are you familiar with the work of the Committee on National Statistics?
A. No.
Q. Have you read any other books or reports by the Committee on National Statistics?
A. Are you identifying this book as a book by that committee?
Q. Well, have you read any publications by the Committee on National Statistics?
A. No. I can't think -- I may have, but I can't think of any book or report by that group. Oh, I forgot to mention Press, Jim Press is on here.
Q. You're talking about J. James Press, the Department of Statistics, University of California Riverside?
A. Yes.
Q. And you know him?
A. Yes.
Q. And he's well-regarded and eminent in his field?
A. Yes.
Q. I want to turn your attention to the page which I call the notice page. It's this page that begins with "Notice". It says that, "The probability that

is the subject of this report was approved by the governing board of the National Research Council whose members are drawn from the Council of the National Academy of Sciences, National Academy of Engineering and the Institute of Medicine. The members of the committee responsible for the report were chosen for their special competencies and with regard for appropriate balance."

Now, are you familiar with the National Research Council?

A. Well, I certainly know the name. I'm trying to think of their connection to NSF.

Q. What is NSF?

A. National Science Foundation. Whether they're part of that or not, I'm sure.

Q. Do you know if the National Research Council is a governmental body?

A. It sure sounds like one, but I don't know that as a fact.

Q. Do you know whether the National Academy of Sciences is a governmental body?

A. I know they get their money from the government and they're located in Washington, but exactly their legal status, I don't know. They've been around for a very long time so they're certainly a well-known

outfit.
Q. Have you ever received grants from the National Research Council or the National Academy of Sciences while you were an academic --
A. I may have. Grants I received came from -- can we go off the record?
(Discussion held off the record.)
BY MR. HAMLIN:
Q. Now, I think the question was have you ever received grants from the National Research Council or the National Academy of Sciences while you were an academic, and your --
A. I wasn't sure because I'm not clear on the relationship with the National Science Foundation. I can tell you I've received grants from the National Science Foundation. As to exactly where or if the National Research Council is connected, I don't know.
Q. Do you regard this book as a reliable authority in the area of statistics as evidence in courts?
A. Depends on what they would say.
Q. I'm not asking you whether you agree with every statement, but I'm asking whether or not you agree that -- well, first of all, you agree that these people are speaking as a group when it comes to this book, right?

A. Let me look at the book. I don't know quite what the structure is. It's apparently very complicated. It appears that your characterization is accurate. It looks like we don't have chapters with separate author titles. Without looking more closely, it appears that this collection of people have somehow coordinated on producing this book. Fienberg appears to have a senior role. He's the one person on the cover.

Q. And you agree that these people who are eminent and well-regarded in their field are speaking about their respective fields, right?

A. I hope so, but I can't agree. I would have to read more closely, but you would hope that would be true.

Q. Without agreeing with every word in the book, do you agree that this Committee on National Statistics and the committee that authored this book is a reliable authority in presenting a book on the role of statistical assessments as evidence in the courts?

A. I'm not sure what that would mean, but this is a group of people that don't even agree among themselves so I'm not sure how to think of them collectively as a reliable authority.

They are very highly-regarded senior

thoughtful people in the area of statistics. I wouldn't diminish that by my comment; but exactly what that means in terms of their collective results here in this book, I guess you could only know by reading the book and deciding what you think.
Q. Have you read the book?
A. I've read portions of it sometime ago. I don't think I've read the whole thing. I take that back. I think I have read the whole thing.
Q. Was that in connection with your work in this case?
A. No. I got it when it came out and read it.
Q. And did you find it to be authoritative?
A. I guess I don't think the way you think. I know these people and I read their book. That's -- I don't know how to stamp things authoritative.
Q. Well, let me ask you this: These people are, as you said, well-regarded in the field of statistics. Did you find their work to be somehow flawed when it came to discussions of statistics?
A. I haven't read it for awhile. There may be elements here that I would disagree with, and if I disagreed, I would hope I would have some good reasons.
Or I can think of another aspect; I may

disagree without you interpreting what you read. So sort of a Biblical thing; one could read the same sentence and come up with different understandings as to what you think you were reading and what I think I was reading. Why don't we turn to something and talk about it. It could be the most interesting part of the deposition.

Q. Let me direct your attention to page 114. Do you have that?

A. Yes.

Q. I want to direct your attention to the paragraph marked "Damages". Do you see that?

A. Yes.

Q. About three quarters of the way down there is a sentence that begins "Experts"?

A. Yes.

Q. That sentence -- actually there is more than a sentence. There is a couple of sentences and they read as follows: "Experts typically provide confidence intervals to go along with point estimates that they obtained." Do you agree with that statement?

A. Yes, that's common.

Q. And the book goes on to say, "Such confidence intervals may be large, but since the issue of

violation has been settled, it seems reasonable to allow the courts with the experts' help to obtain the best point estimate possible, even if the zero damages estimate is within a reasonable confidence interval." Do you have any reason to disagree with that statement?

A. Basically I would -- I basically would agree with that, although there would be extreme -- I would have a couple things to add to it to make sure I was not misunderstood. First, even if you agree with that, it doesn't mean that you can now ignore or forget about the meaning of the confidence interval. It's still there. It's still large. It still embraces zero by this hypothetical, and that may be a matter of consequence for the Court.

The second thought is that there -- there almost certainly has to be a limit on this point; that once the uncertainty in the estimate becomes overwhelmingly large, potentially picking a vague term here, the Court, even under the circumstance that as it says the issue of violation has been settled, might rule out through some legal ruling. I forgot what you call it, not admit I think is your word -- or a jury might choose to disregard it just on the basis of the huge uncertainty.

Q. So with those two thoughts you would agree with this statement?
A. Yeah, basically I agree with that statement.
Q. Now, let me direct your attention to your affidavit which has been marked as Exhibit 4879. Now, your comment on confidence intervals -- strike that. In your expert report you make a comment about confidence intervals, and you refer to your affidavit. Let me show you Deposition Exhibit 4878. Specifically you have a reference in there about statistical significance, and you make reference to your affidavit, right?
A. Yes.
Q. Now, in your affidavit the paragraphs that refer to statistical significance are 6, 7, 8, 9, 10 and 11, correct?
A. Yes.
Q. As I understand it, in your affidavit the only model that you refer to is DHS or diminished health status model mixed, right?
A. Yes. That's all the affidavit discusses.
Q. Now, you yourself didn't run any confidence intervals on the diminished health status model mix, right?
A. I think I did. I've used your experts'

programs.
Q. Well, your comments in the affidavit refer specifically to the plaintiffs' experts calculations of confidence intervals, correct?
A. Yes, but I've done that too.
Q. Well, did you calculate new confidence intervals for the diminished health status mixed model?
A. What do you mean when you add mixed?
Q. Well, I'm only referring to the diminished health model mix that you refer to in your affidavit.
A. That's -- I think it's referring to part of the DHS model. The -- well, I have -- using the plaintiffs' programs, sometimes using them on calculations that -- where they did not report confidence intervals I have calculated confidence intervals many, many times.
Q. With respect to your comments in your affidavit about the diminished health status mixed model, you say that the model lacks statistical significance, right?
A. Yes.
Q. Is that because the confidence interval goes below zero?
A. Yes.
Q. Let me ask you this: With respect to your

supplemental expert report, you mention, "The nursing home model and you state that it does not possess statistic" --
MR. BIERSTEKER: We're not quite with you yet.
THE WITNESS: Okay.
BY MR. HAMLIN:
Q. Do you see on page 6?
A. Okay.
Q. You state that, "The nursing home model does not possess statistical significance," right?
A. Yes.
Q. Now, is that because the confidence interval goes below zero?
A. Yes.
Q. You also state that the -- it looks like, "Zeger's smoking attributable claim for medical expense for age 35 and older does not possess statistical significance." Do you see that?
A. Yes.
Q. Does that refer to the refined model?
A. It includes that.
Q. Or is this a separate calculation that you made?
A. It's a calculation I made.
Q. This is not a calculation the plaintiffs made?

A. It's not one they reported. I don't know what they made. I would point to my computer programs for the source of this number.
Q. Now, you say that this claim for medical expense for age 35 and older does not possess statistical significance. Does this refer to both the State of Minnesota estimate and Blue Cross?
A. If you want, we can turn to the details; but just judging from the language, it would because I'm not apparently differentiating in the paragraph.
Q. So it would between the state and Blue Cross?
A. Yes. If we wanted to know that for sure, we could turn to the backup which would be in tab 18 of book 2.
Q. Again, the reason that you find that this particular claim does not possess statistical significance is because the confidence interval goes below zero?
A. Yes.
Q. Let me show you what's been marked as Demonstrative Exhibit 2077A. As I understand it, you provided the basis for this demonstrative exhibit; is that right?
A. Yes.
Q. Under the circumstances titled "Public Aid and

Non-Public Aid Populations," correct?
A. Yes.
Q. Now, is this exhibit based on NMES?
A. Yes.
Q. Let me direct your attention to the first line which is, "Greater average overall medical expenses." Do you see that?
A. Yes.
Q. And you've got the block under public aid marked?
A. Yes.
Q. I take it that means that in your estimation the public aid population has a greater average overall medical expense; is that right?
A. Yes.
Q. And -- well, why don't you tell me this: How did you arrive at that conclusion? Did you just gather up all the dollars for public aid and compare them to all the dollars for non-public aid?
A. I think so. If you'll give me a moment, I'll look it up. Yes. I can see that I have the calculation does exactly that in tab 2, book 2.
Q. Now, did you make any adjustment for age or sex in coming up with that number?
A. Well, I have it by age and by gender, yes.

Q. What was the adjustment that you made by age?
A. Well, I have it by age group 35 plus. I have it by the now familiar age groups, 19 to 34 and so on. I have it by male, female and male, female. A lot of those age groups. I've got pages of it.
Q. How many age groups did you use in calculating this greater average overall medical expenses? Is it just one or more?
A. All I did was fill in a square here on Exhibit 2778, so I suppose you could fill in the square based on one or you could fill it on more. The filled in square doesn't really require that it be one or the other because there is no actual number printed here.
Q. Well, what was the basis for filling in the square?
A. The many materials in this tab 2. So if you want to press me on it, we can do it, but I'd say taken as a whole, tab 2 listing pages of those expenses suggest a higher average expense for public aid. And you can do it in a variety of ways.
Q. I know you can do it in a variety of ways, but did you adjust by the age group of 35 plus? That was one adjustment, right?
A. Right. If you do it that way, you get the same result.

Q. In -- well let's see. You also did an age adjustment by using the groups 19 to 34 and 35 to 64 and 65 plus; is that right?
A. Yes.
Q. Did you age stratify in order to get that result?
A. You could call this age stratify if you would like.
Q. But you didn't compare, for example, 35 year -- strike that. You didn't compare 35-year-old public aid recipients to 35-year-old non-public aid recipients?
A. Yes, I did.
Q. You compared them in groups, right?
A. Yes, in groups.
Q. You didn't compare just the 35-year-old public aid recipients to just the 35-year-old non-public aid recipients, right?
A. No, I did not.
Q. Or non-public aid people, right?
A. You're correct, I did not.
Q. And that would also be true of greater average of all medical expenses?
A. Yes. I'm sure that's just a subset; that page you showed me is a subset of 2777.

Q. I show you what's been marked as Trial Exhibit 2080(a). You've also got an entry here titled, "Greater Average Overall Medical Expenses." Do you see that?
A. Yes.
Q. Did you age adjust to get that result?
A. I have it -- I have it by age adjusted categories, yes.
Q. What were those age adjustment categories?
A. Same ones we have been talking about; either as a whole or 35 plus, or in the much used categories that you're familiar with.
Q. Let me show you a demonstrative exhibit which we just received, "Relative cost of smokers is lower in populations with more health risks." Do you see that?
A. Yes.
Q. Is that a demonstrative that you have helped prepare?
A. Yes.
Q. Now, you've got a number of entries here. General population, what does that refer to?
A. That's NMES.
Q. The next, two or more risk factors, and the next entry is six or more risk factors, and the next one

is public aid population. What are the risk factors that you're referring to?
A. There is -- they're listed in the program CODERISKFACTORS2.SAS.
Q. Now, is it your testimony that the public aid population has or consists of a population with all six or more risk factors which you identify in this exhibit?
A. No, that's not my testimony.
Q. Well, when you say that the public aid population has most risk factors, what are you referring to?
A. I see what you mean. The horizontal access, those little placards there are guidance for the reader that as you go to the left you're getting fewer risk factors, and as you go to the right you're getting more risk factors; whereas there will be some people in public aid who have fewer than risk factors I assume. On the average they would have more than six risk factors.
Q. When did you do this calculation?
A. I can't tell you a date.
Q. Was it after you prepared the supplemental expert report?
A. Yes.

Q. So your supplemental expert report does not reference this calculation?
A. Correct.
Q. And if we look in this program, are you saying that we will find all of the risk factors for the public aid population that support this last block in this demonstrative exhibit?
A. I don't know what you mean by the last block.
Q. The one that says public aid population and the block or the graph goes below zero.
A. No. That's a misunderstanding. The last bar labeled public aid population is simply the public aid population.
Q. Well, does the bar represent or tell us anything about the relative costs of smokers?
A. In the public aid population, yes.
Q. And how is it that you -- strike that. What does it tell us?
A. As a whole or you're talking just about the last bar?
Q. The last bar.
A. It tells us that the relative cost of smokers is less than one, and in the public aid population.
Q. What does relative costs mean?
A. It's like a relative risk, ratio of cost. If

two groups had the same average cost, it would have a result of one because the numerator and denominator would be equal.
Q. What groups are you comparing here?
A. In the public aid bar?
Q. Yes. In order to come up with this Public aid bar.
A. Smoke -- average smokers and never smokers.
Q. In the public aid population?
A. On the right-hand side bar, yes.
Q. Now, can you identify any literature on health care costs that computes a relative cost of smokers in a Public aid population?
A. You mean leave aside your experts in this case you mean? Talk about some published literature?
Q. I'm talking about published literature.
A. There may be. I can't think of one. Far more common is relative risks, but I don't have one in mind. There may be some.
Q. You didn't go to a specific piece of scientific literature to come up with this concept of relative costs of smokers is lower in populations with more health risks, right?
A. I'm not sure which concept it is that you're inquiring about.

Q. The one that you're illustrating in this exhibit.
A. Well, the exhibit as a whole is one thing, and the particular division of the single bar on the right-hand side seems to me to be quite a bit distinct from that, and I'm not sure which one you're talking about.
Q. Did you rely on any published literature for this demonstrative exhibit?
A. Yes.
Q. Which did you rely on?
A. Published literature which indicates that in special high risk populations that relative risks for risk factors including the risk factor in smoking as an example tend to be smaller than in, say, the general population.
Q. Can you cite an article as you sit here today?
A. You can see it in your -- what I call the Control Data study which is Voight and somebody.
Q. Now, is the conclusion that you draw from this --
A. I'm sorry. Earlier you asked about literature that did a relative cost. I think it's done in that article.
Q. Did you say the Voight study?

A. V-o-i-g-h-t and the co-author.
Q. And this is Milliman & Robertson did you say?
A. Maybe we're mixing up two things. If we got the thing out, maybe I could be sure. Maybe I could refer to it as the Control Data study, because in the lower right-hand corner it says Control Data, and if I'm thinking about the right article, within that article that present data illustrating the point about diminishing relative risks in high risk population.
Q. What is it you're asking the reader to draw from this demonstrative exhibit?
A. That the relative risks of smoking are different and less in high risk populations like public aid population than they are in say the general population.
Q. So this is a calculation of relative risk?
A. No. I'm tired. If I said relative risk -- it's true for relative risk, but it's also true for relative cost.
Q. Well, what does that mean in layman's terms?
A. I thought it was easy to understand so I'm not sure how to phrase it differently. I'll try if you want to probe a little bit, but I thought I had used layman terms.

Q. Well, in essence you're saying that the public aid population is high risk, right?
A. Yes, that's -- I would say that.
Q. And that using that high risk population as a base, the smokers don't increase the relative risks by much in that population?
A. That's true also. The more general point is high risk populations, whether they be public aid or not, show in continuation of the relative risks of individual risk factors. I think that's fairly wide appreciated.
Q. As you sit here today, you can't identify -- well, can you identify any of the risk factors that you're referencing in this exhibit?
A. Yes.
Q. What are you referencing as risk factors?
A. Well, I gave you a place where you can read them, but I can read them to you if you would like.
Q. Sure.
A. Not physically active, poor income, less than 7.5 hours of sleep, not seat belt user, not breakfast, not high school grad., not married, overweight, Medicaid, risk-taker, what I call not social support but I think it's infrequent social contact is the variable, depression, SSI disability

recipient, doesn't feel they can share feelings with someone.
Q. Let me ask you this: Do any of those factors have any effect on how much a smoker spends to treat a smoking-related disease?
A. It might. It wasn't the point of the demonstration, but that's the answer.
Q. Now, would you agree that smokers in high risk populations have lungs similar to smokers in lower risk populations?
A. I'm sure there are similarities and differences.
Q. But just from a purely physical standpoint, do you know of any difference between the lungs of smokers in high risk population versus those in lower risk populations?
A. As a statistician, I would expect differences.
Q. Do you know of any medical differences?
A. I would expect systematic medical differences.
Q. Do you have any basis for that statement?
A. Statistical, one they're not -- they're a special population, rather extreme special population. Unless you're doing random sampling, it's almost a certainty that you will see systematic differences between the special population and the general population on essentially any dimension you

like.
Q. Including lungs?
A. Yes, I would expect that.
Q. Let me ask you about Trial Exhibit 3074. Now, when you compared the costs in that exhibit, did you adjust by age?
A. Yes.
Q. What was that age adjustment?
A. I think it's the standard categories, 35, 64 and 65 plus. Let me look it up.
MR. BIERSTEKER: As I recall, there was a subsequent in relation of this 3074, but I may be mistaken.
MR. HAMLIN: I think that's it.
MR. BIERSTEKER: I said I may be mistaken, but something in the back of my head --
MR. HAMLIN: That's the most recent one we have. I mean, we did get a new one and I think that's it, unless you have a different memory.
MR. BIERSTEKER: Never mind. My memory is cluttered.
THE WITNESS: Is there a question?
BY MR. HAMLIN:
Q. The question I believe was what age adjustments did you make in that particular exhibit.

A. 35, 64 and 65 plus.
Q. So you compared those groups, right?
A. No, that's not correct.
Q. I'm sorry. 35 plus, that includes everybody over 35?
A. It does. But to keep this on track here, it includes in separate strat. 35 to 64, 65 plus.
Q. And did you compare those specific groups; that is 35- to 64-year-olds to 35- to 64-year-olds and 65 plus to 65 plus?
A. I think the comparison is available on my spreadsheets, but I don't recall what it is.
Q. I'm not asking the specifics of the comparison; I'm asking whether you did that comparison.
A. It's unclear how to answer. If I did it, it's sitting right here in a page in front of me; so I guess I did do the --
Q. But you did compare age groups, right?
A. What I did was to make a bar chart that is 3074 which is a stratified calculation taking into account both age and gender, and then behind that I have a spreadsheet that gives fine detail for males and females of various age groups.
Q. How did you stratify by age?
A. For the purposes of this chart, 3074?

Q. Yes.
A. 35 to 64, and 65 plus.
Q. You didn't compare when you sampled 35-year-olds to 35-year-olds just in that one strata, right?
A. I calculated the values and displayed them so they're there for viewing. I don't mean viewing on Exhibit 3474 where you're looking now; I mean information behind that which is book tab 3511.
Q. But you did not compare the specific group of, say, 35-year-olds to another specific group of 35-year-olds; you compared by age groups, right?
A. Now I'm with you. I did not do the specific age group of 35 and not 36, for example. It was a group, 35 to 64.
Q. So you took that group and compared it to another group of 35 to 64, right?
A. That's where I'm falling off. I didn't explicitly make those comparisons, but they're sitting here on the page available for anyone who wants to look at them to make the comparison. There are so many comparisons here.
Q. What book are you referring to; what's the depo exhibit number?
A. It's in tab 11.
MR. HAMLIN: Off the record.

(Discussion held off the record.)
BY MR. HAMLIN:
Q. In your supplemental expert report, you state that, "Zeger's diminished health, public aid, hospital expense model to calculate attributable expense due to each of six factors; insurance status, weight" --
A. What page please?
Q. -- "Gender, income, marital status and seat belt use." I'm referring to page 6 of your supplemental report.
A. Okay. You didn't read it accurately, but I know what you're talking about.
Q. What didn't I read accurately?
A. I thought you were saying Zeger's model calculates, and I read I used Zeger's, et cetera, to calculate.
Q. What you did was you took Zeger's model and you calculated attributable expense due to each of six factors which you list in the report, right?
A. Yes, that's correct.
Q. Now, when you made this calculation did you set the smoking coefficients to one?
A. I don't think so.
Q. Let's talk about the first factor for which you

develop a SAF. I think you call it insurance status, right?
A. Yes.
Q. And what you do then is attempt to calculate a smoking attributable fraction due to insurance status; is that right?
A. I wouldn't call it "smoking attributable". I call it attributable fraction.
Q. Well, can you point to any scientific literature which finds that insurance status is a risk for increased medical costs for smoking-related diseases?
A. I don't have anything in mind, but that doesn't mean it isn't fact.
Q. Is there -- well, once you develop this risk fraction, I guess, or attributable risk or attributable expense fraction, you then -- well, do you apply it to any dollars?
A. Yes.
Q. And you also developed a separate attributable expense fraction due to weight, right?
A. Yes.
Q. And can you identify any scientific literature which finds that weight is a risk factor for increased medical costs for smoking-related diseases?
A. Yes. I'm sure that wouldn't be hard at all. I

don't have an article. Probably the Surgeon General's report would say that.
Q. So it's your statement that the Surgeon General's report would say that weight is a risk factor for increased medical costs for smoking-related diseases?
A. I'm sure I could find that.
Q. And then the next factor that you talk about is gender, right?
A. Yes.
Q. And again, you develop an attributable expense fraction for gender; is that right?
A. Yes.
Q. Can you identify any scientific literature which finds that gender is a risk factor for increased medical costs due to smoking-related diseases?
A. I may not have been listening close enough to these questions. Have you been saying cost throughout?
Q. I've been saying costs.
A. I didn't pick up on that. When I was pointing to the Surgeon General, I was thinking of health and mortality. For costs, I wouldn't look there. I would look to -- I think that Control Data study may have it; the one we talked about earlier.

Q. Would have what?
A. Results supporting the view that, for example, weight is a -- we'll call it a cost factor; it doesn't have a gender. It may or may not have gender, but it's still going to be a cost factor. Seat belt use, all the things that are on my list. I've forgotten the exact items that are in that Control Data article. There are several.
Q. And you're saying that gender then is a risk factor for increased medical costs for smoking-related diseases?
A. I'm sure it is.
Q. And you're citing this Control Data study for that proposition?
A. I'm speculating that that may be in there. I know there are various factors in there.
Q. Do you know of any other study?
A. Of risk factors for increased costs?
Q. For smoking-related diseases.
A. Not off the top of my head, no.
Q. Now, are you saying that the Control Data study calculated the increased risk -- strike that -- the increased medical care costs due to gender?
A. I don't remember which, but what I remember is there were several risk factors. I'm not going to

use your "due to" word because as a statistician it doesn't have that orientation. But what we would call risk factors or systematic differences in groups, it has several in there. Whether it has males and females separately, I don't know, but I have no doubt myself that it would be correct.
Q. I'm not asking you whether or not the risk factor was in the study. I'm asking you whether or not the study actually calculated the amount of additional expense for smoking-related diseases due to gender.
A. It calculated differences -- then you are asking me; it has -- I would have to get the article. I haven't memorized the article. If you wanted to get it in front of us, I can be more specific.
What I can tell you from memory is it looks at differential costs, but for a variety of risk factors. Whether it has gender, I don't recall. It has several other things.
Q. When you say "differential costs", are you saying that the costs were actually broken out for each specific risk factor such as weight, gender and other risk factors?
A. I recall some charts with some different costs in them. I don't remember how many charts for how

many factors. But I'm not able to give answers at that level of detail about that article unless we can get it in front of, us and I didn't bring it so I can't pull it out of the box here.
Q. Now, was this the Chrysler article or Control Data?
A. I'm going by memory. I thought it was the Control Data. In the lower right-hand side corner it said Control Data to my recollection.
Q. Where did you see it?
A. I've had it in my office.
Q. Where did you -- how is it that you saw this report? Was this a report that plaintiffs provided in this case?
A. I don't recall how we came by it. I've seen it.
Q. Can you give me a definition of what you mean by "attributable risk"?
A. Yes. There is actually several variations on the concept and -- but basically it is a measure of a difference in risk in two populations. That's probably the simplest way. I think Mr. Samet defined it that way, and that's probably the simplest way.
Q. So you don't have any problems with the way Dr. Samet defined it?
A. No. I don't have any problem with his

definition, but there is not just one definition of that. It's like -- I think it's like many things in life. There is several different versions of that concept.
Q. Would you agree that in merely all attributable risk calculations where you've got multiple factors you can always pick out certain positives which will add up to more than 100 percent?
A. No. I don't know that you could always do that.
Q. But you can do that in many cases, right?
A. I haven't done it in many cases. You can do that in those instances where there are several important risk factors and where they are correlated.
Q. That doesn't undermine the validity of the study, right?
A. What study?
Q. If you have a study where there are multiple risk factors, and you add up the attributable risk percentage, and they equal more than 100 percent, are you saying that that makes the study invalid?
A. What I'm saying is that that could make the interpretation of -- of the size of any one risk factor suspect because it would be evident that there is a mixing together of risk factors that are being encompassed under one name.

Q. Well, my question is, if you have multiple risk factors, and you add them up to more than 100 percent, are you saying then that the study is invalid?

MR. BIERSTEKER: Objection. Asked and answered.

THE WITNESS: What study?

BY MR. HAMLIN:

Q. Any study.

A. You would have to be more specific.

Q. So you wouldn't say that if that happens, the study is always invalid?

A. What study? You could be talking about a study that has nothing to do with risk factors. You would have to tell me what study and what aspect of the study you're talking about. I think I've already given quite a fulsome answer a couple of answers ago. So I think we're okay with my answers so far.

But as to the answer to the current question, you're just not being specific enough about what study you're talking about; even hypothetically you're not being specific enough.

Q. Have you seen a study where the attributable risk percentage added up to more than 100 percent, apart from anything in this case that the plaintiffs'

experts have done?
A. Yes.
Q. Can you identify one?
A. Yes. Surgeon General reports have that characteristic. I should say the characteristic is one of human health, but you can see that phenomenon reported in the Surgeon General report.
Q. What phenomenon is that?
A. The phenomenon arising from the fact that when it comes to human health, there are several factors that have large impact on health and they tend to be correlated, and the result of that more or less mechanically is that they will be -- that each of those risk factors, when calculated separately in the usual way, will really be a composite of that risk factor and some portions of the other, some contributions from the other, so that when you total them, you're going to get more than 100 percent, at least what is often more than 100 percent.
Q. Now, talking specifically about those Surgeon General's reports where that happens, is it your testimony that those Surgeon General's reports are invalid because of that fact?
MR. BIERSTEKER: Asked and answered.
THE WITNESS: No. My testimony is

that the individual relative risks or attributable risks would be exaggerated in those instances.
BY MR. HAMLIN:
Q. And they would be exaggerated because of this phenomenon of correlation that you referred to?
A. Yes.
Q. Last question. Just give me a brief definition of what you mean by correlation in the context which we have just been discussing.
A. Well, I mean the standard name and Pierson definition. I mean a measure of para-wise linear association.
Q. How about a lay person's definition?
A. Well, it's a formula. Correlation qualitatively means that if in a population you see examples of a variable that are unusually large in that particular instance by that person, it's a better than even bet that some other variable is also large. And when that phenomenon is, in fact, operating, you say those two things are correlating.
MR. HAMLIN: Thank you.
(Time: 4:30 p.m.)
* * *

C E R T I F I C A T E

I, NANCY K. JOHNS, RPR, hereby certify that I am qualified as a verbatim shorthand reporter; that I took in stenographic shorthand the testimony of WILLIAM E. WECKER, Ph.D. at the time and place aforesaid; and that the foregoing transcript consisting of pages 409 through 571 is a true and correct, full and complete transcription of said shorthand notes, to the best of my ability.

Dated at Minneapolis, Minnesota, this 20th day of April, 1998.

_____

Nancy K. Johns, RPR, Notary Public
Hennepin County, Minnesota
My commission expires January 31, 2000.

C E R T I F I C A T I O N

I, WILLIAM E. WECKER, Ph.D, the deponent, hereby certify that I have read the foregoing transcript consisting of pages 409 through 571, and that said transcript is a true and correct, full and complete transcription of my deposition except:

WILLIAM E. WECKER, Ph.D.
Deponent

Sworn and subscribed to before me this day of , 1998.

Notary Public

My commission expires